Issue 191
PS
1968 Series
PRE
MAIN
CE
HLY
GOTTA HAND IT TO CLAUDE... KEPT ON SENDING IN THOSE EIR'S....
Will Eisner

TO GET PUBLICATIONS, YOU . . .

Do it Yourself

A lot of guys have this problem, so listen real close because it's strictly "do-it-yourself."

First — To get publications that are already printed, you order them on that handy orderblank, DA Form 17. You order administrative and doctrinal type pubs (like AR's, pamphlets, FM's) from the pubs center at Baltimore. Technical and supply pubs are at the St. Louis pubs center. Forms are available at both centers. Each center gave your unit an account number. Be sure to use it when you order.

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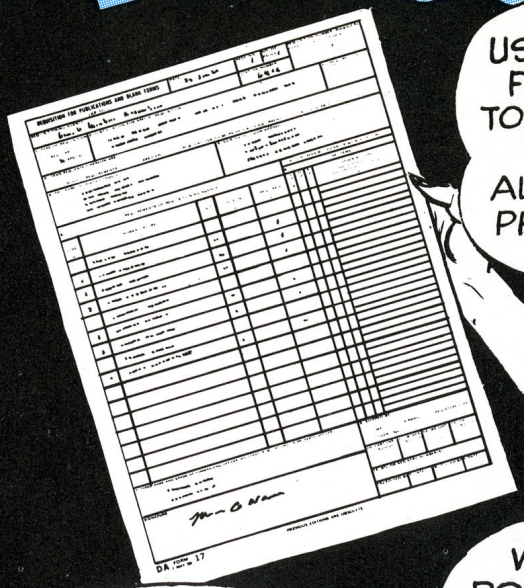

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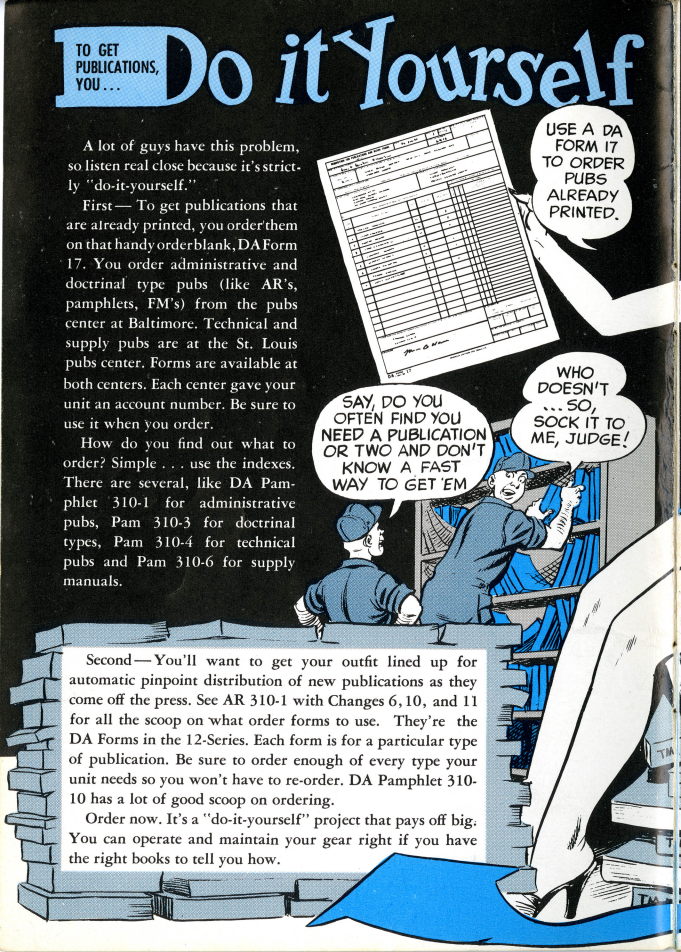

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THE PREVENTIVE MAINTENANCE MONTHLY

Issue No. 191 1968 Series

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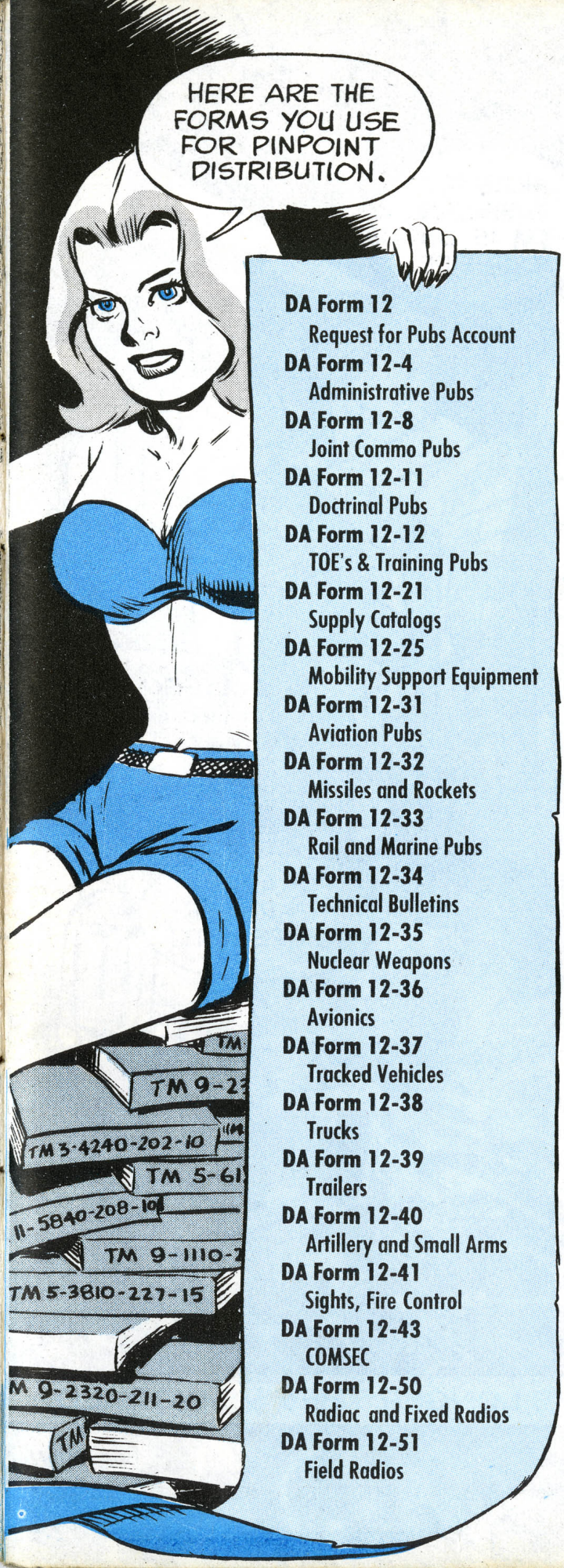

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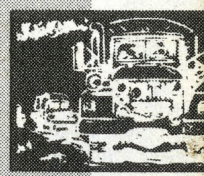

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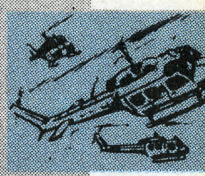

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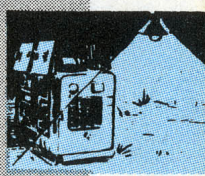

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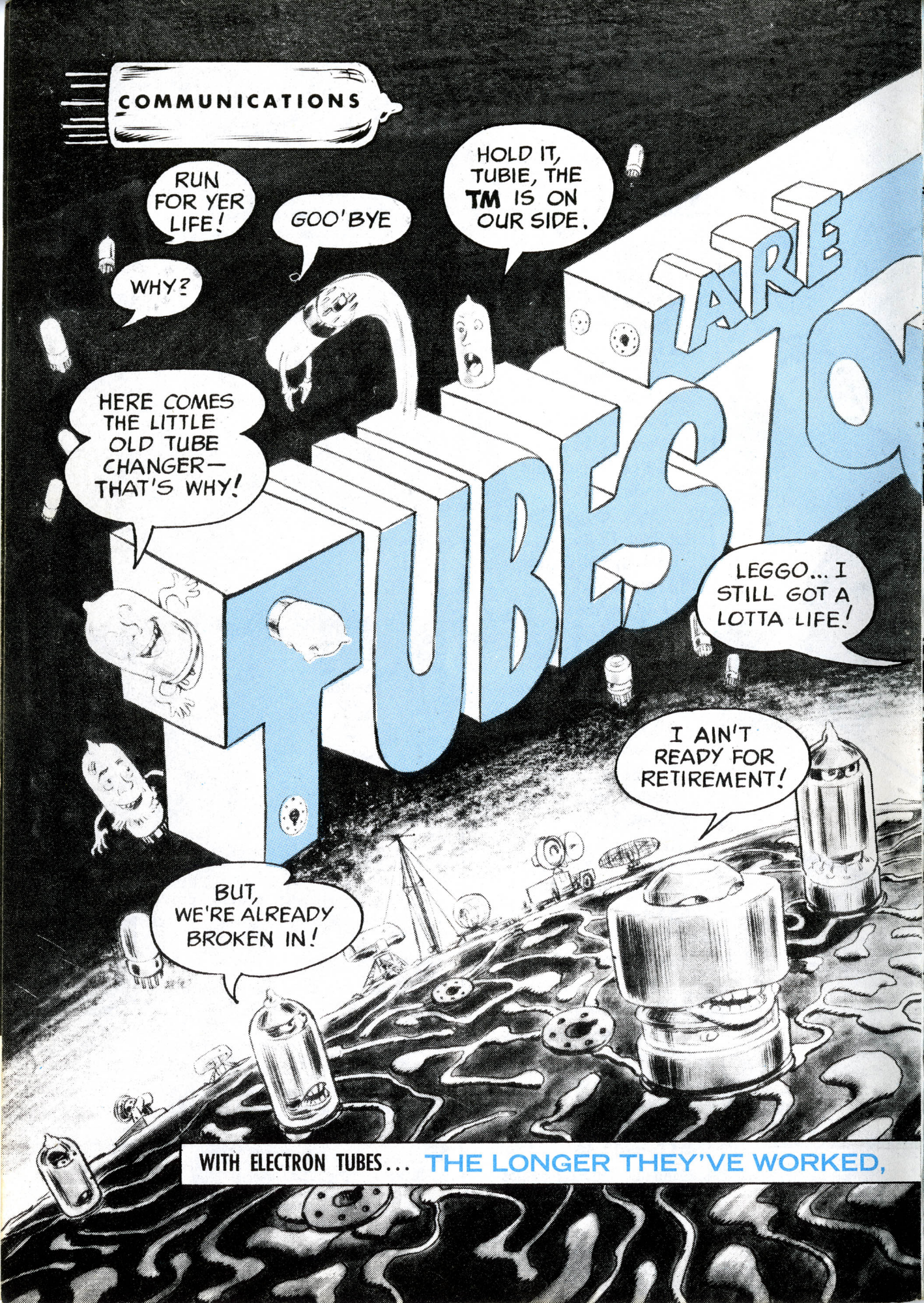
COMMUNICATIONS
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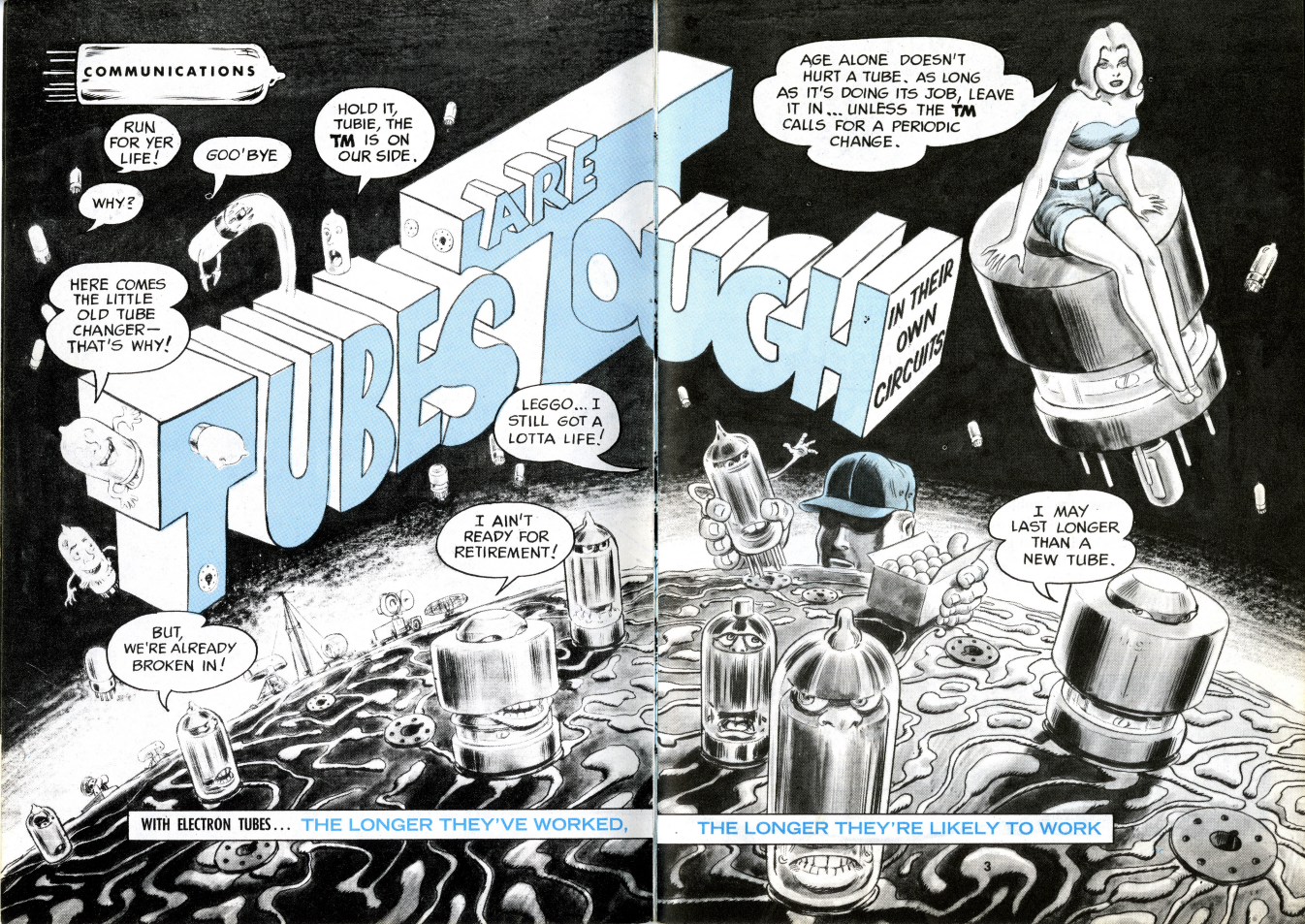
HOLD IT, TUBIE, THE TM IS ON OUR SIDE.
WHY?
HERE COMES THE LITTLE OLD TUBE CHANGER— THAT'S WHY!
ARE
TUBES
LEGGO... I STILL GOT A LOTTA LIFE!
I AIN'T READY FOR RETIREMENT!
BUT, WE'RE ALREADY BROKEN IN!
WITH ELECTRON TUBES... THE LONGER THEY'VE WORKED,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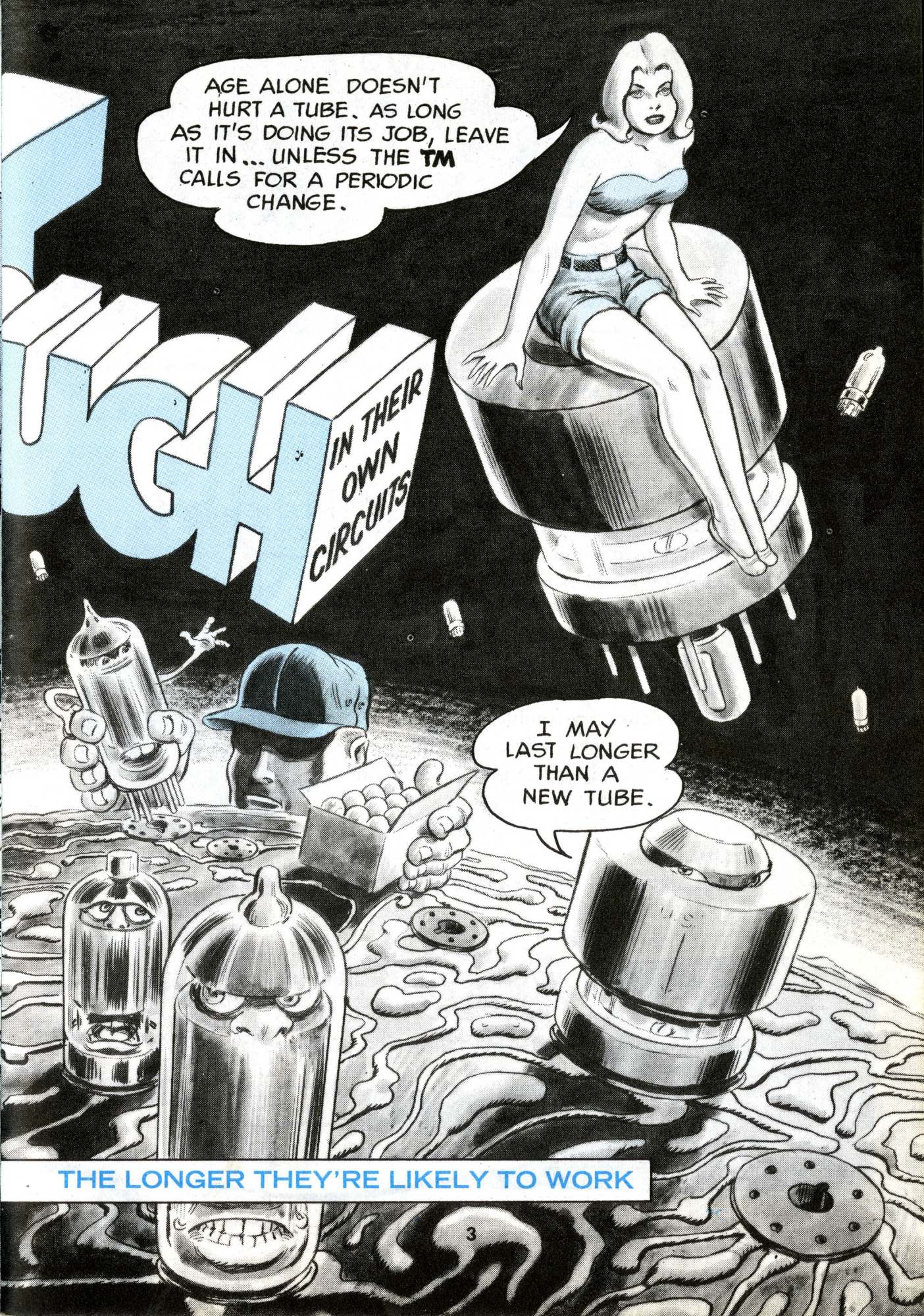
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UGH!
IN THEIR OWN CIRCUITS
I MAY LAST LONGER THAN A NEW TUBE.
THE LONGER THEY'RE LIKELY TO WORK

Dear Half-Mast,

Is there in the supply system a zippered canvas cover for the RT-524 receiver-transmitter? Only ones I've ever seen were homemade.

SP5 R. L.

Dear Specialist R. L.,

You bet . . . it's the CW-653 cover. It's on page 260 of SC 5820-IL-1 (Oct 66), under FSN 5820-082-3741.

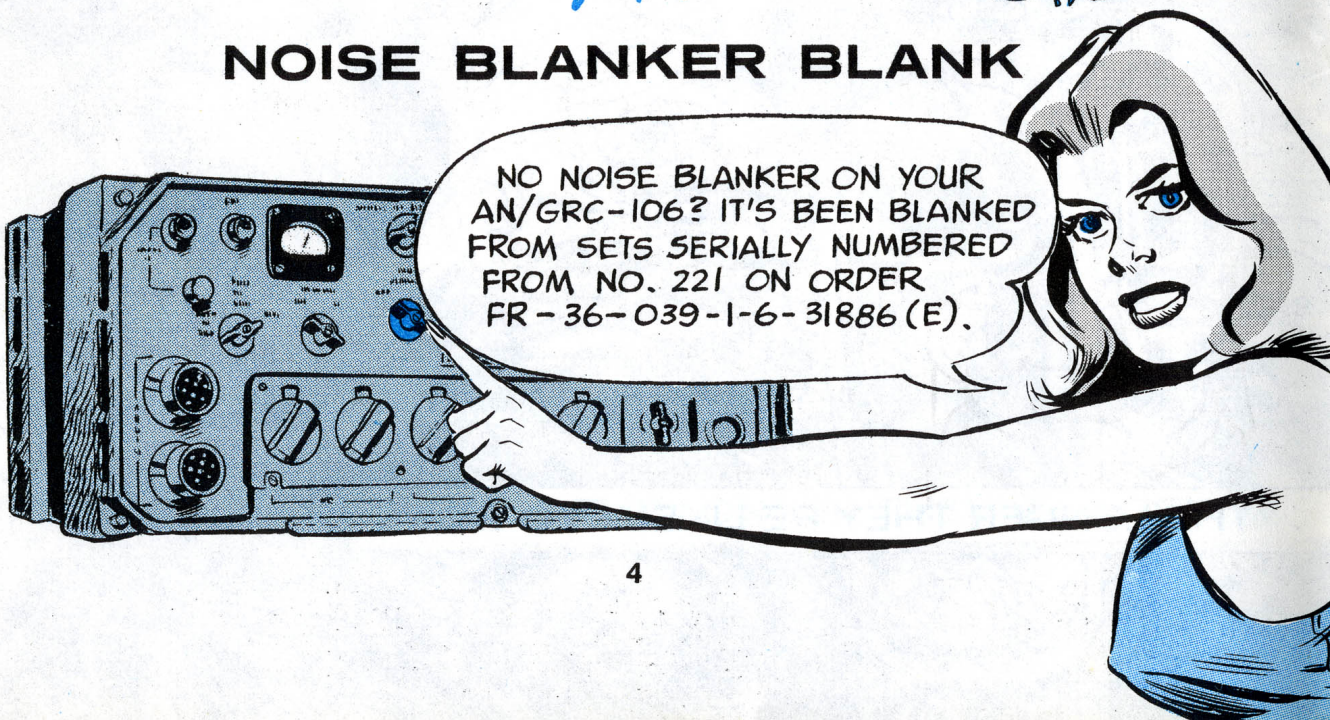
The cover's also used for the RT-246 and AN/GRC-125 and AN/VRC-53 radio sets.

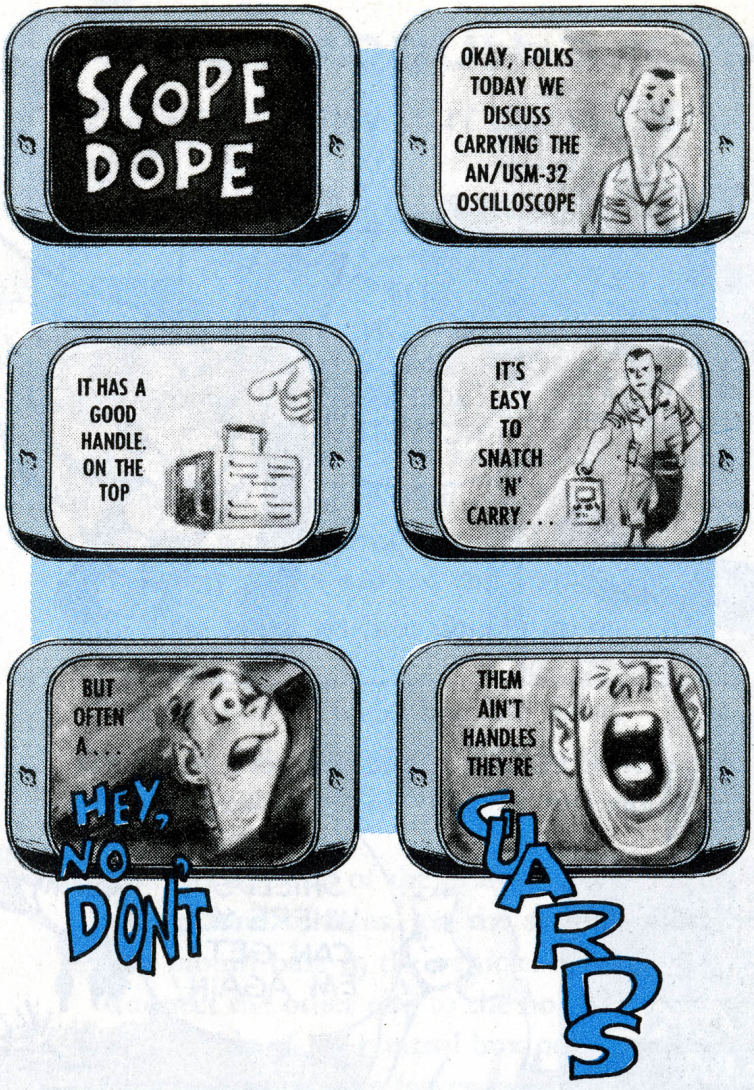
One thing, though . . . it's bad business to use the covers in buttoned up vehicles like tanks, or in places with high humidity and temperatures. The covers mess up the air flow, and the heat that builds up in the radios can mean circuitry troubles.

Same sort of thing happens when you stuff rags, clothes and the like behind commo gear to get them out of the way.

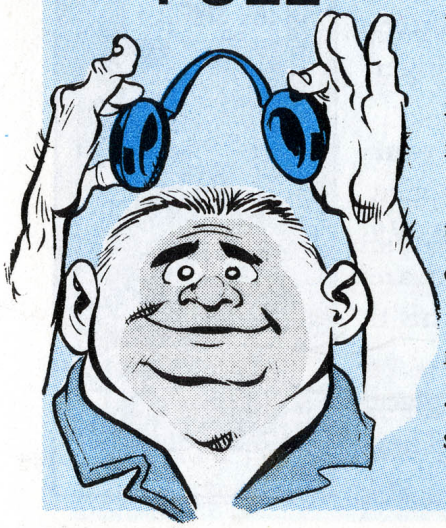
Half-Mast

NOISE BLANKER BLANK





GETTING AN EAR FULL



Trying to listen through loose flopping earphones can rub you the wrong way and make for a headset headache.

Sure, you can botch your headset. You can grab it by the earphones and heavyhand it as you spread them, like when you're getting set to put 'em on.

Be careful not to put a permanent kink in that spring-metal headband. This will keep right on weakening and nix the headband's future.

Also, rough handling could strain the connection between the headband and the receiver element, and soon call for a replacement receiver housing.

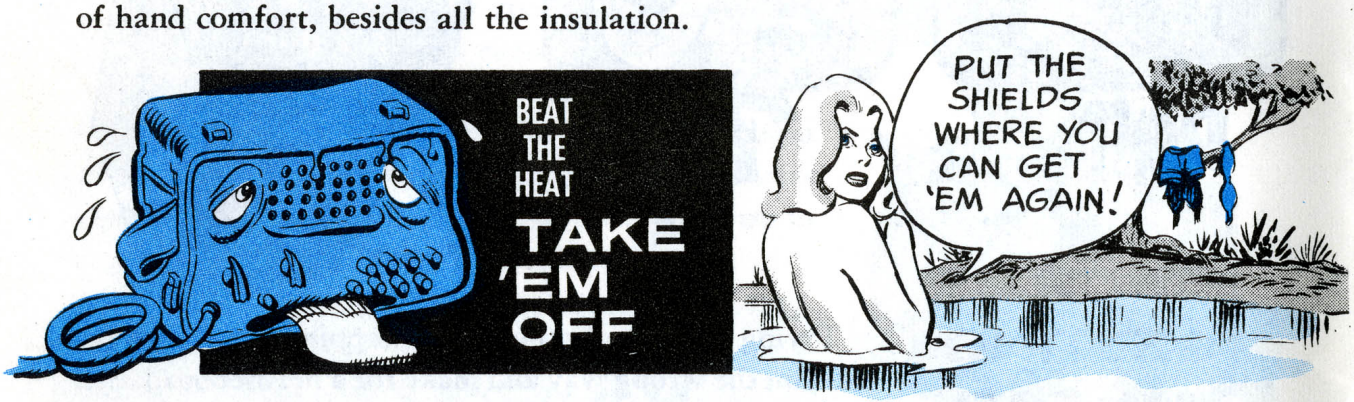
The right way to handle your headset or headset-microphone is to place your hands . . . gently, o'course . . . around both the headband and the earphones, then spread the earphones apart.

Easy, like so . . . That should do the job.

HANDY HANDLE HUGGERS

You needn't be shocked by those bare-bottomed TL-13A pliers . . . like you'll find in the TE-33 tool equipment.

The tube doesn't cost a cent . . . it's easy to install . . . and you get a nice hunk of hand comfort, besides all the insulation.



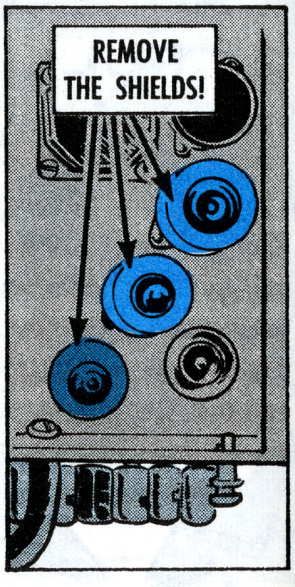
Gettin' the hots in your signal equipment can sure put a kink in communications.

Take the TA-182/U telegraph-telephone signal converter.

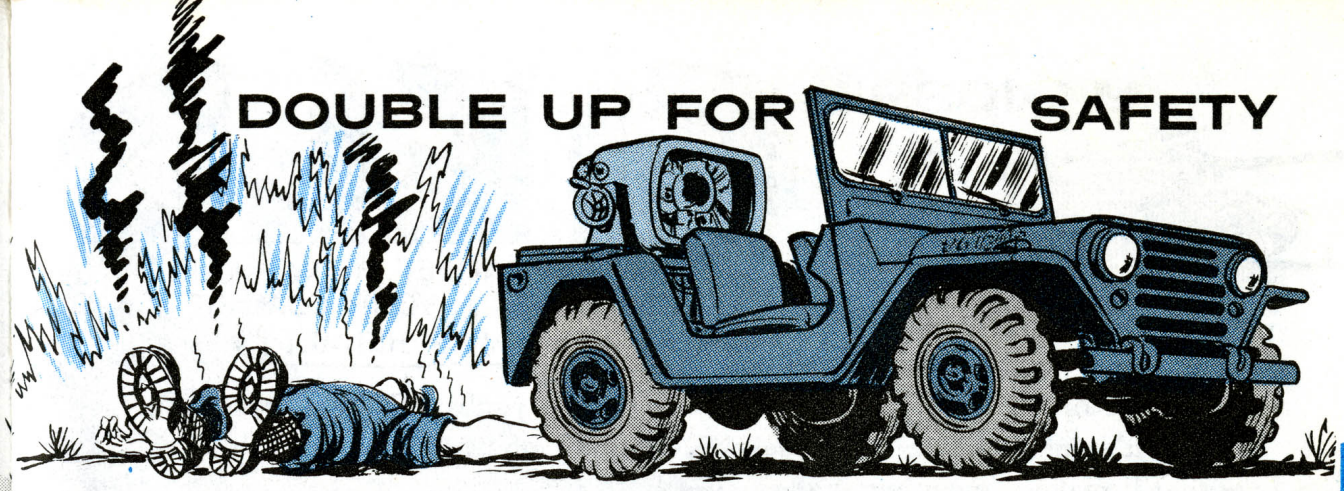
Too much heat will knock the ting-a-ling out of the ringer by shortening the life of electron tubes and rectifiers.

When it's so hot you can't count the sweat beads on your head, do this before puttin' power to the equipment. Open up the TA-182 and remove the tube shields from the V2, V5 and V6 tubes and V7 and V8 rectifiers. If V7 and V8 are solid state rectifiers, then do not remove the shields. This'll give the converter a breather and keep 'er in business.

O'course, hang on to the shields and put 'em in a safe place so they can be reinstalled when you're not operating. They protect the tubes when you're on the move.



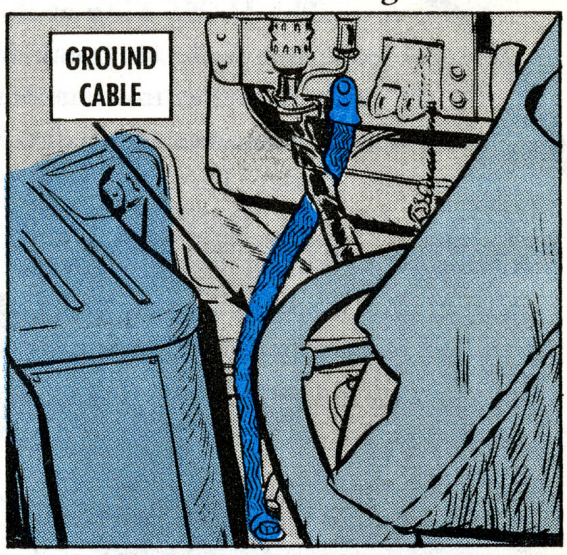
DOUBLE UP FOR SAFETY



Do you want to hear a real shocker?

Some AN/MSS-3 Xenon searchlight operator-type never noticed his ground cable was wearing away or was broken.

The way to get around this half-safe situation when the searchlight's tied in with your M151 truck is double up on the ground cable.



Get a 1/2-in wide braided wire, about 2 1/2-ft long, or as long as the present ground cable, from your maintenance support.

Connect one end of the braided wire to the ground terminal on the searchlight's mount base in the vehicle.

Connect the other end to the bolt on the right side of the control box power cable connector on the lower mounting bracket.

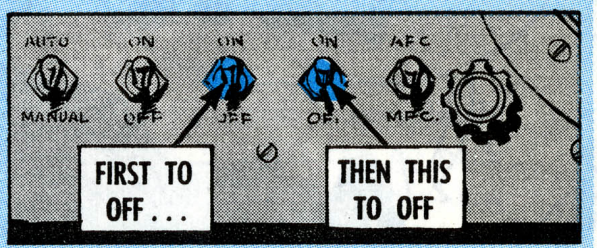
ON AN/MPQ-10( )

SWITCH WHICH SWITCH?

A big package with a lotta power can help put a silence on a cannon roar or a mortar flump . . . that is, if its power is up to snuff.

One thing you've gotta be extra careful about with that AN/MPQ-10( ) radar set is the order in which you flip the switches.

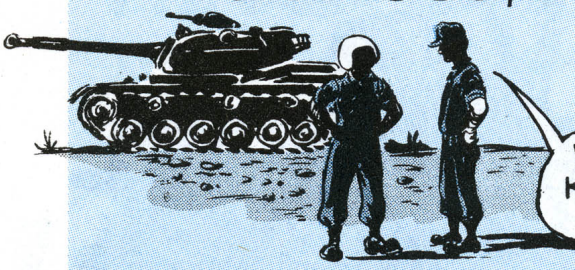
Like in the PP-747 keyer power supply . . . Make sure the transmitter switch is turned OFF in the IP-177 azimuth-range indicator before the ON-OFF switch is turned OFF on the PP-747.



A switcheroo of the switch turn-off can burn up the PP-747.

O' course, your best bet's to follow the steps for normal radar set shutdown in Para 79 of TM 11-1303 (Jun 54).

MK-1039/G FIELD

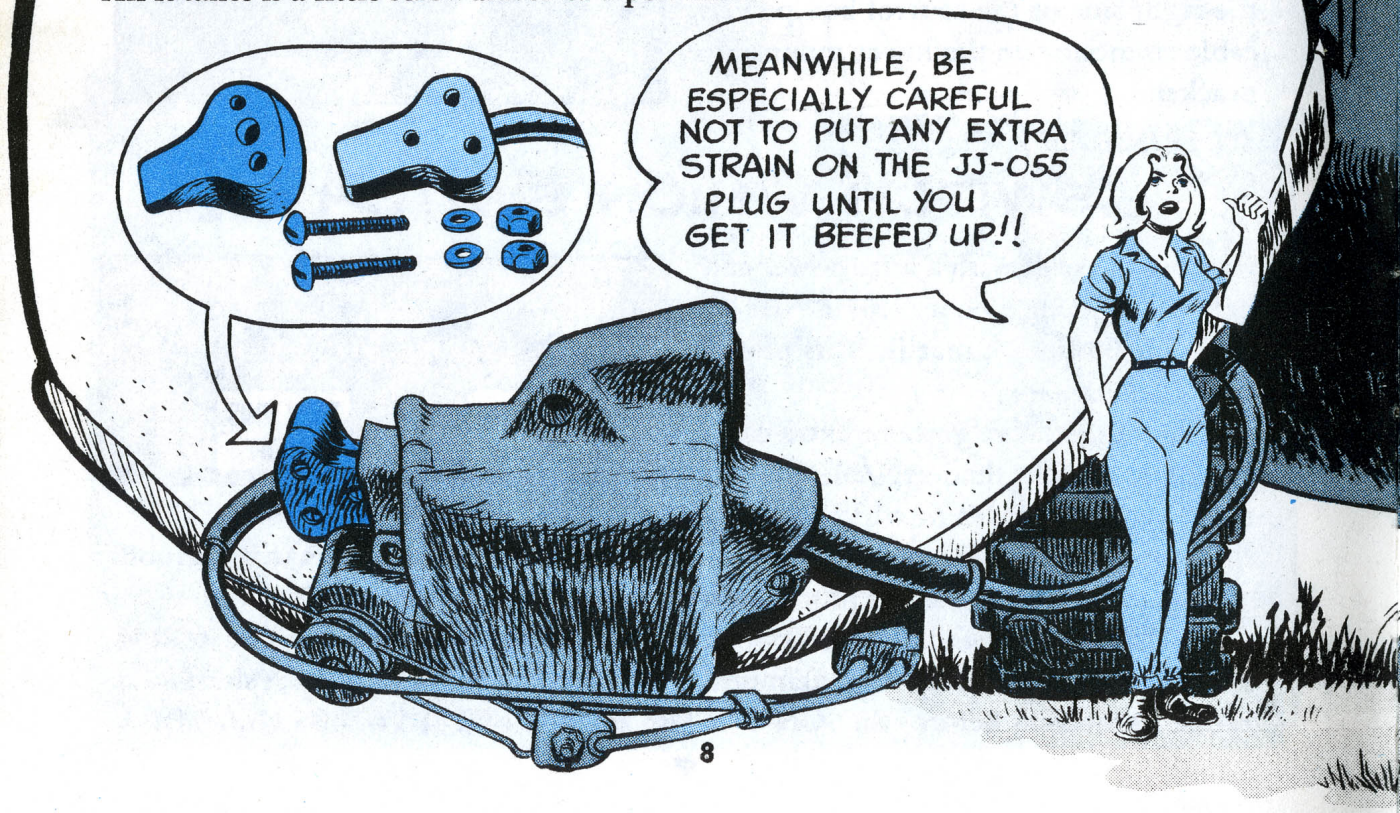


If it's one of the MK-525/G or MK-526/G sets, you're OK and one up.

But if it's one of the early model MK-1039/G jobs, here're a couple of field fixes that'll make it even better than ever.

FIX No. 1 —

The JJ-055 plug at the end of your mike cord is a little too weak for the work it has to do. It can't take too much shock and vibration, particularly at cold temperatures. A wedge kit to beef up this plug is now in supply under FSN 5935-G38-9899. Ask your supply man to get one for you. The kit's stocked at Atlanta Army Depot, ATTN: AMXAT-Q, Forrest Park, Georgia 30050, Sacramento Army Depot, ATTN: AMXSA-Q, Sacramento, California 95813 and 1st Logistical Command, if you happen to be in Southeast Asia. When you get the wedge kit you ask your unit's commo man to put it on for you. You could even do it yourself. All it takes is a little screwdriver or a pen-knife.



MK-1039/G FIELD FIX NEWS

WHAT KIND OF HEADSET MICROPHONE KIT DO YOU HAVE IN YOUR COMBAT VEHICLE CREWMAN'S HELMET?

If it's one of the MK-525/G or MK-526/G sets, you're OK and one up. But if it's one of the early model MK-1039/G jobs, here're a couple of field fixes that'll make it even better than ever.

FIX No. 1 —

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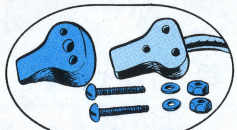
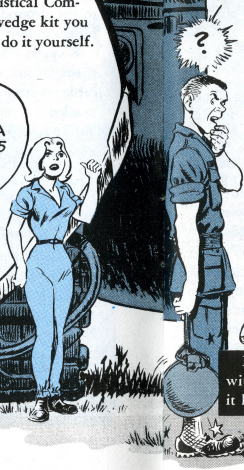


MEANWHILE, BE ESPECIALLY CAREFUL NOT TO PUT ANY EXTRA STRAIN ON THE JJ-055 PLUG UNTIL YOU GET IT BEEFED UP!!



FIX No. 2 — Heavy rains (Southeast Asia is famous for 'em) can short out terminals in your switch if the waterproof coating has been cracked on two terminal screws that are side by side.

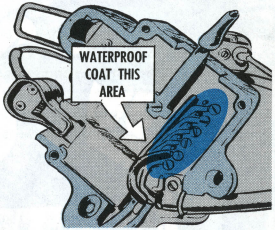
Instead of going where it should, the current jumps between the screws. When this happens both radio transmission and intercom can be completely blacked out.

The original waterproof coating gets cracked when somebody tightens the screw terminals or takes off the switch assembly and plays around with it.

Get your unit's radio repairman to waterproof these terminals if you are getting shorts or if you think the waterproof coating has been cracked.

He'll do this by taking the whole MK-1039/G out of the helmet, and thoroughly drying the terminal strip and surrounding area.

Using fungus and moisture resistant varnish MIL-V-173, he will paint all 6 terminal screw connectors and the exposed metal surface of each connector. Order this varnish in quart containers under either FSN 5970-683-4297 or FSN 5970-548-9520.



After the varnish is completely dry the MK-1039/G can go back in the helmet again. Be careful not to crack the waterproof coating.

No problem if you have a late model MK-1039/G because it comes equipped with a reinforcing section in the switch housing to support the connectors and it has the right JJ-055 plug connectors.

FIX NEWS

FIX No. 2 — Heavy rains (Southeast Asia is famous for 'em) can short out terminals in your switch if the waterproof coating has been cracked on two terminal screws that are side by side.

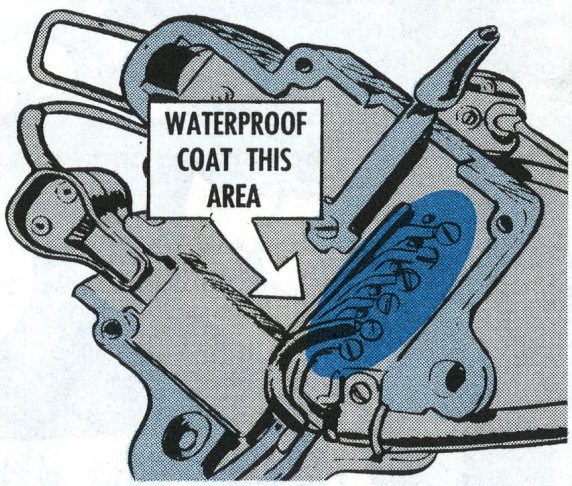
Instead of going where it should, the current jumps between the screws. When this happens both radio transmission and intercom can be completely blacked out.

The original waterproof coating gets cracked when somebody tightens the screw terminals or takes off the switch assembly and plays around with it.

Get your unit's radio repairman to waterproof these terminals if you are getting shorts or if you think the waterproof coating has been cracked.

He'll do this by taking the whole MK-1039/G out of the helmet, and thoroughly drying the terminal strip and surrounding area.

Using fungus and moisture resistant varnish MIL-V-173, he will paint all 6 terminal screw connectors and the exposed metal surface of each connector. Order this varnish in quart containers under



either FSN 5970-683-4297 or FSN 5970-548-9520.

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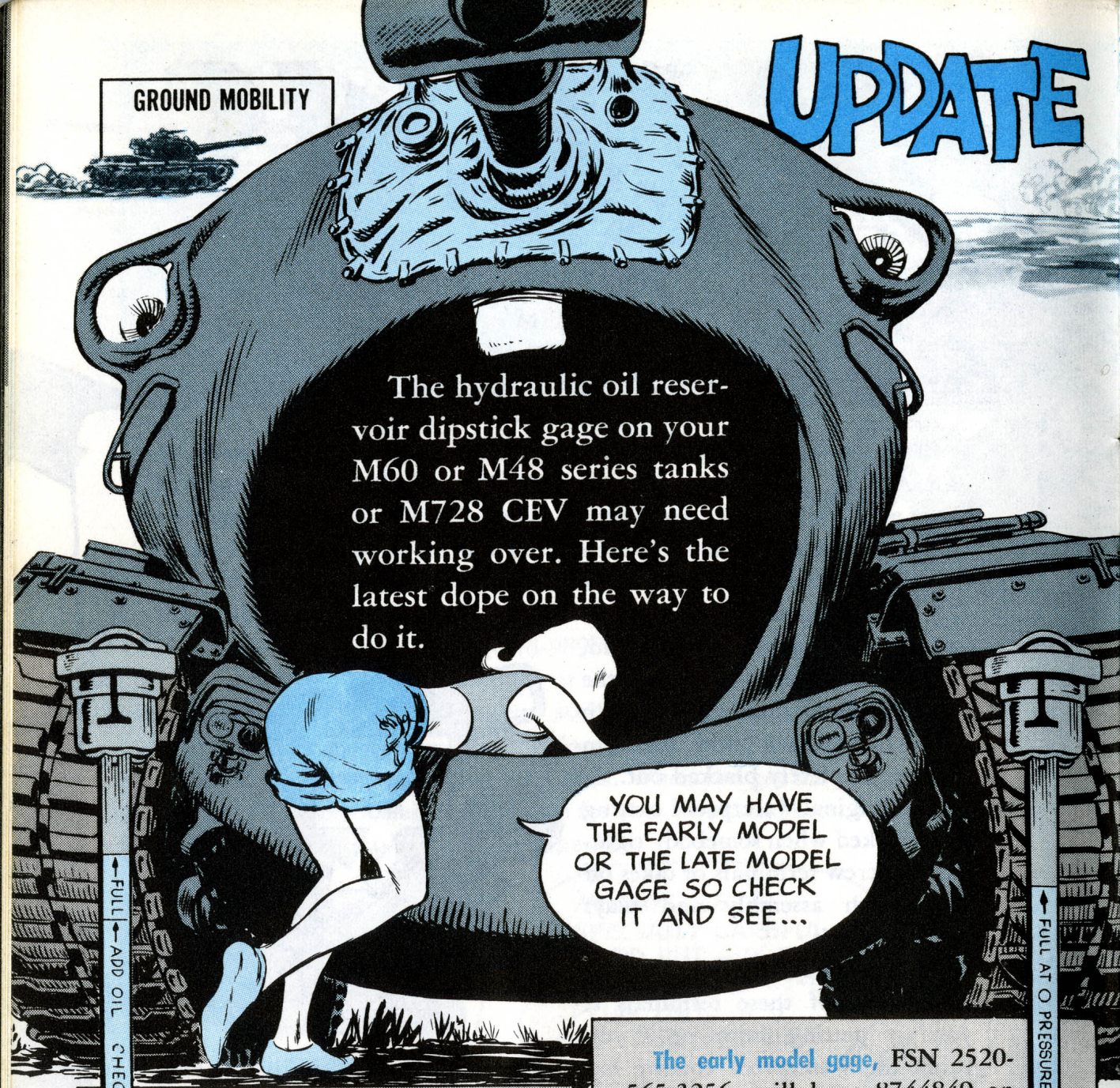

The late model gage, FSN 6680-754-4112, has the part number 10934383 marked on one side and FULL ADD OIL and CHECK OIL AT O PRESSURE on the other side. If you have it, shake hands with yourself because you're lucky. It's OK.

The early model gage, FSN 2520-565-3256, will have 8744849 on one side and FULL AT O PRESSURE and FULL AFTER PUMPING on the other. If you have it, get out your trusty Metal Stamping Die Set FSN 5110-289-0007 (it's part of Automotive Maintenance Tool Kit No. 2, Common, FSN 4910-754-0650) and unlimber the letter F.

GROUND MOBILITY

UPDATE

The hydraulic oil reservoir dipstick gage on your M60 or M48 series tanks or M728 CEV may need working over. Here's the latest dope on the way to do it.

YOU MAY HAVE THE EARLY MODEL OR THE LATE MODEL GAGE SO CHECK IT AND SEE...

FULL → ADD OIL — CHECK OIL LEVEL AT O PRESSURE

FULL AT O PRESSURE — FULL AFTER PUMPING →

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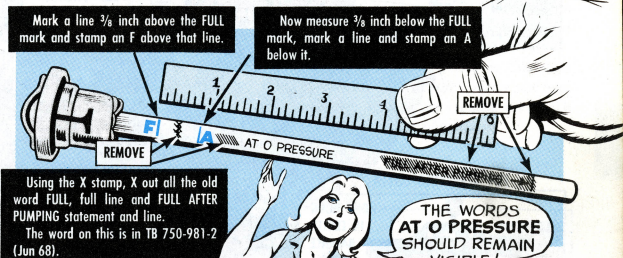
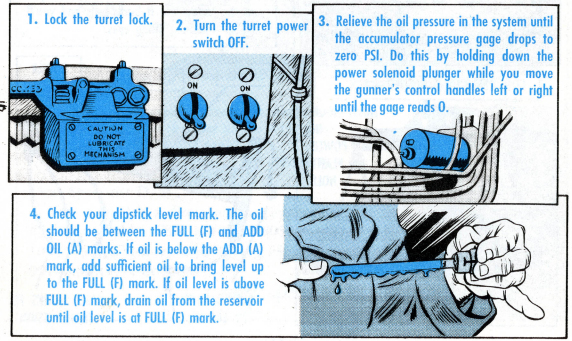
GAGE GUIDE

OK, now that you have the F in your hot mitts—here's how to update your old dipstick.



Once you have the old dipstick gage updated, you can check the oil level the same way whether you have the old gage or the new. This is how you do it—



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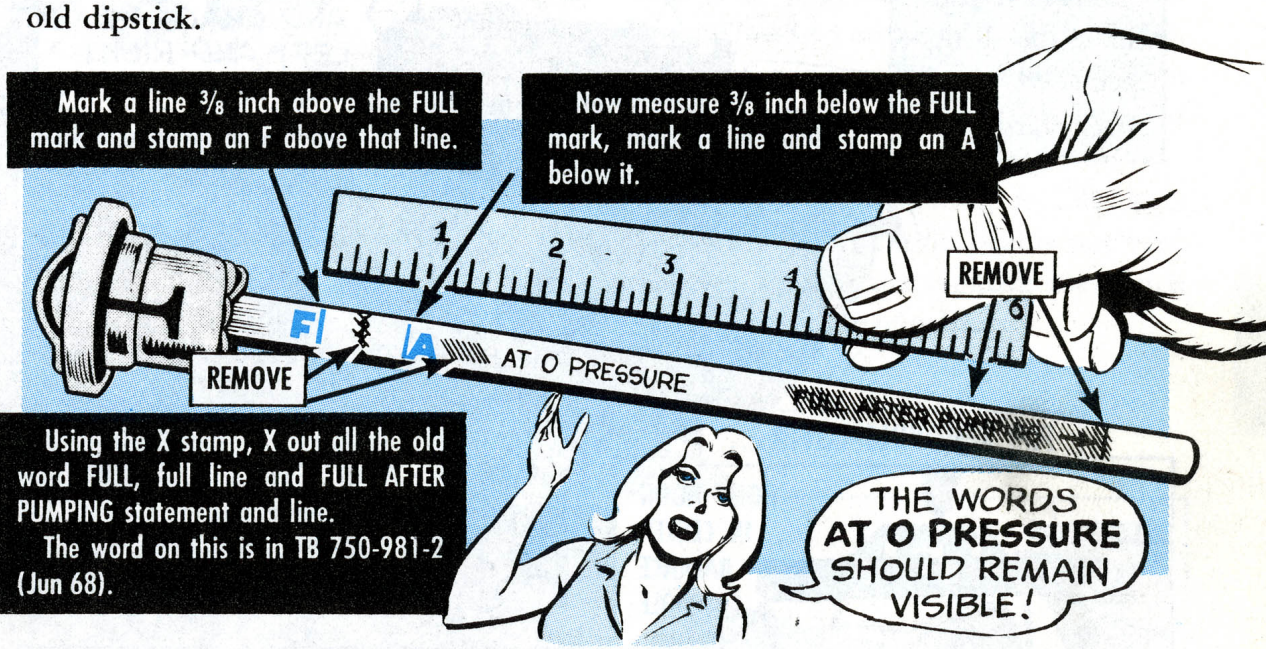
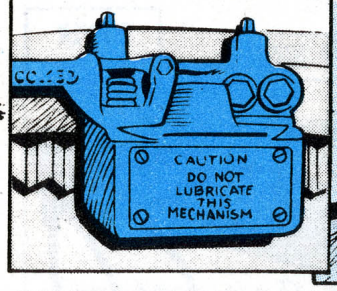
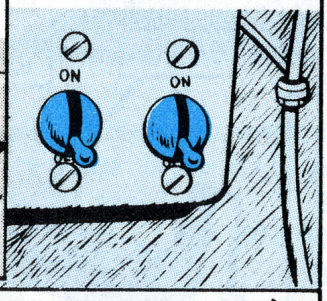


Once you have the old dipstick gage updated, you can check the oil level the same way whether you have the old gage or the new. This is how you do it—

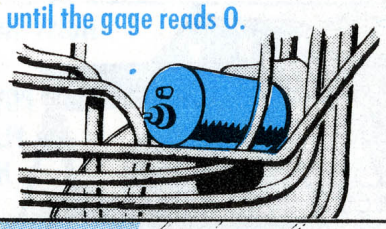
1. Lock the turret lock.



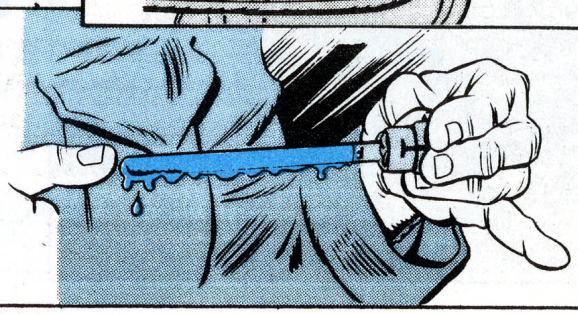
2. Turn the turret power switch OFF.



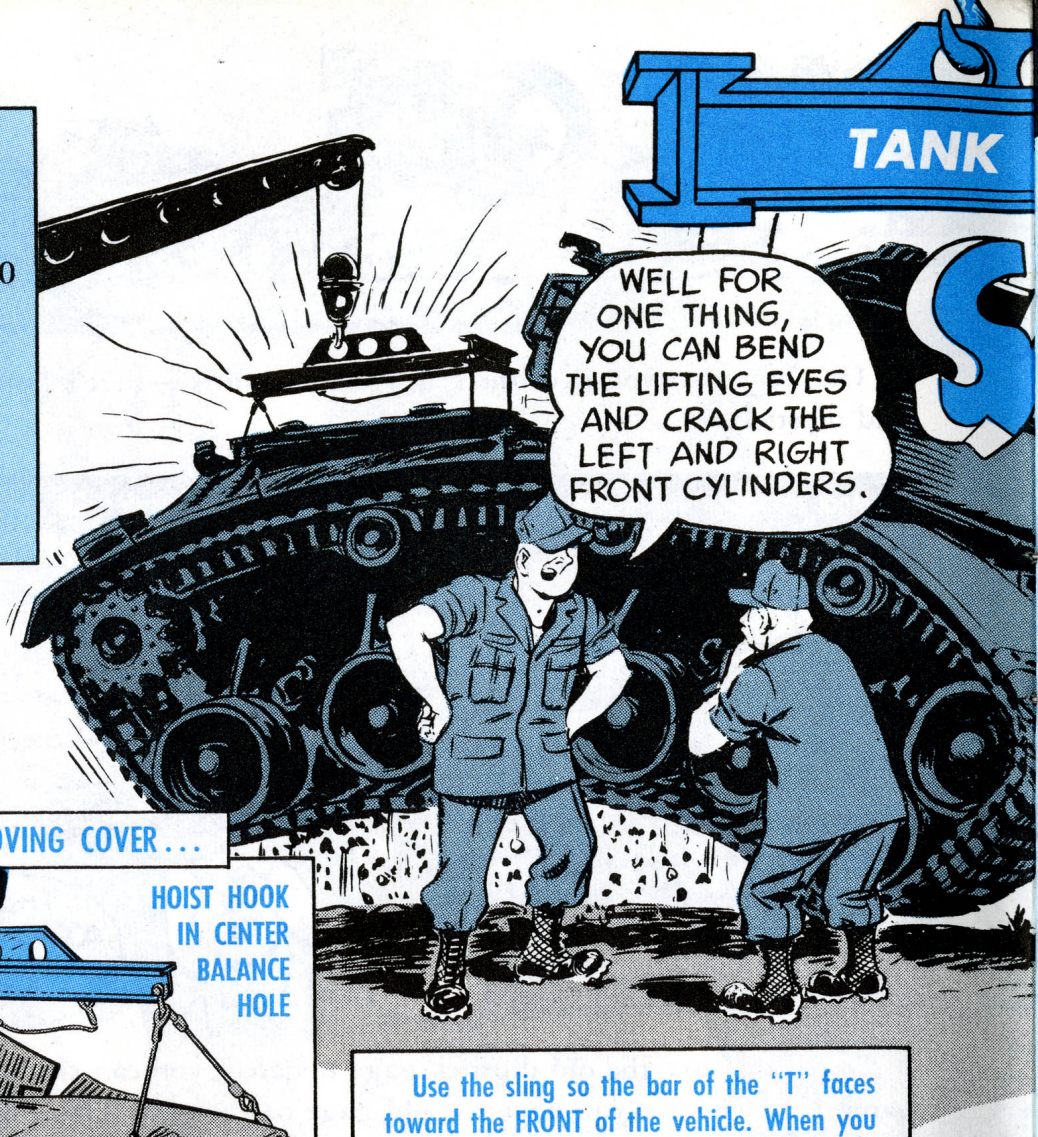
3. Relieve the oil pressure in the system until the accumulator pressure gage drops to zero PSI. Do this by holding down the power solenoid plunger while you move the gunner's control handles left or right until the gage reads 0.



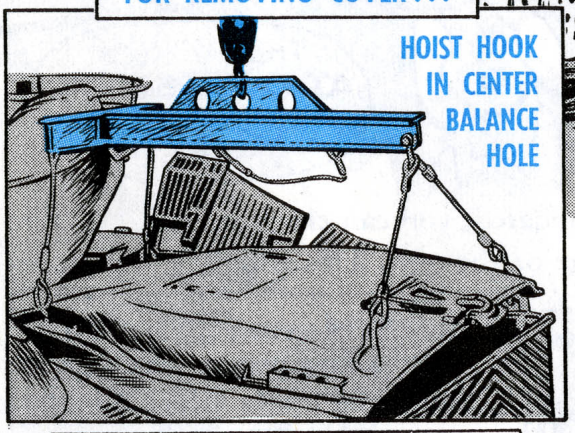
4. Check your dipstick level mark. The oil should be between the FULL (F) and ADD OIL (A) marks. If oil is below the ADD (A) mark, add sufficient oil to bring level up to the FULL (F) mark. If oil level is above FULL (F) mark, drain oil from the reservoir until oil level is at FULL (F) mark.



Pulling the power pack on your M48A3 or M60 series tank can do a lot of damage if you have the sling attached backwards.

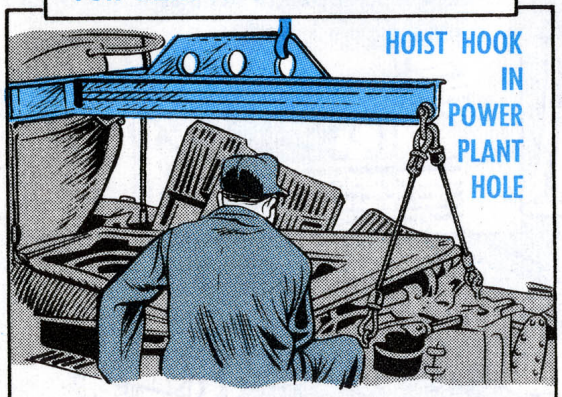


FOR REMOVING COVER . . .

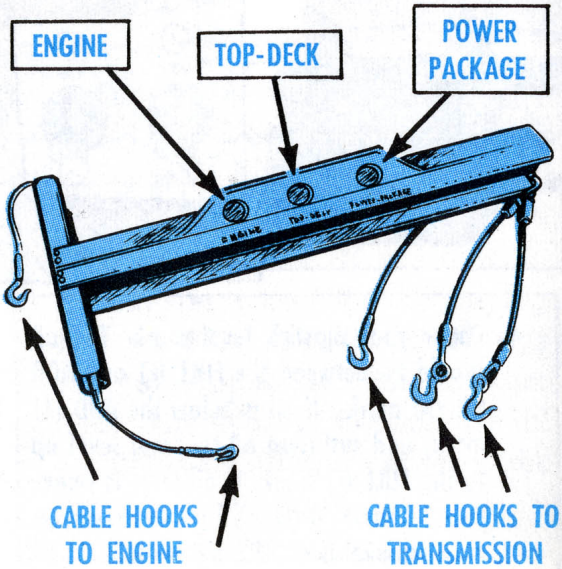


Use the sling so the bar of the "T" faces toward the FRONT of the vehicle. When you pull the engine use it backwards and you'll end up with bent lifting eyes.

FOR REMOVING POWER PACK . . .



MAKE SURE THE T-BAR FACES FRONT OF VEHICLE



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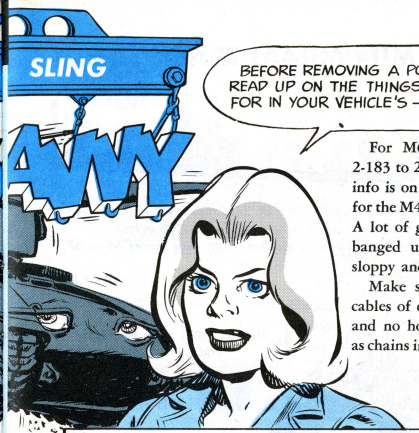
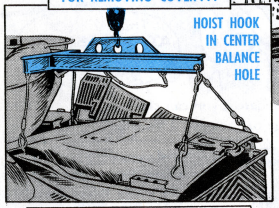
TANK SLING SAVVY



For M60 series tanks read pages 2-183 to 2-198. For the M728 CEV the info is on pages 2-181 to 2-194A, and for the M48A3 on pages 2-175 to 2-186. A lot of good power packs have been banged up and damaged because of sloppy and careless handling.

Make sure your sling is OK with cables of equal length, beams not bent and no home-made rigging used such as chains in place of cables.

FOR REMOVING COVER...



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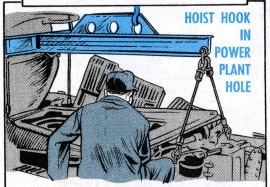

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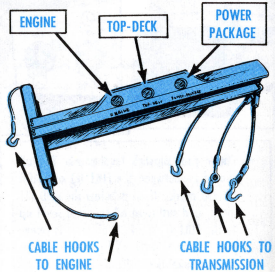
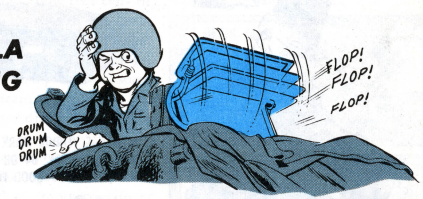


CUPOLA SPRING FSN



Dear Half-Mast,

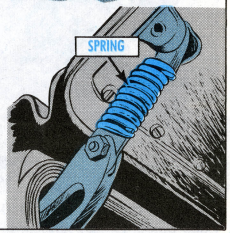
How can we company mechanics order the spring used to close the door on the M119 periscope mount on the M60A1 tank?

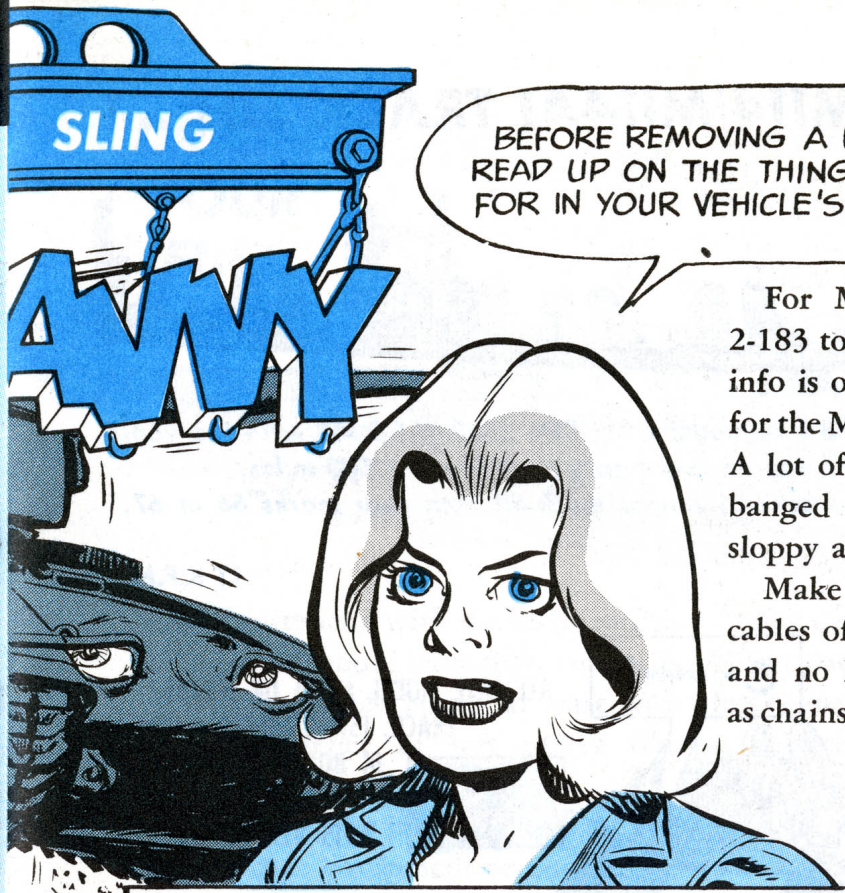
SP5 D. M.

Dear Specialist D. M.,

You can't. It's a direct support job, using Spring assembly, FSN 1240-910-8053 (P/N 10516632), which replaced Spring, FSN 1240-991-8430 (P/N 8619661).

Half-Mast





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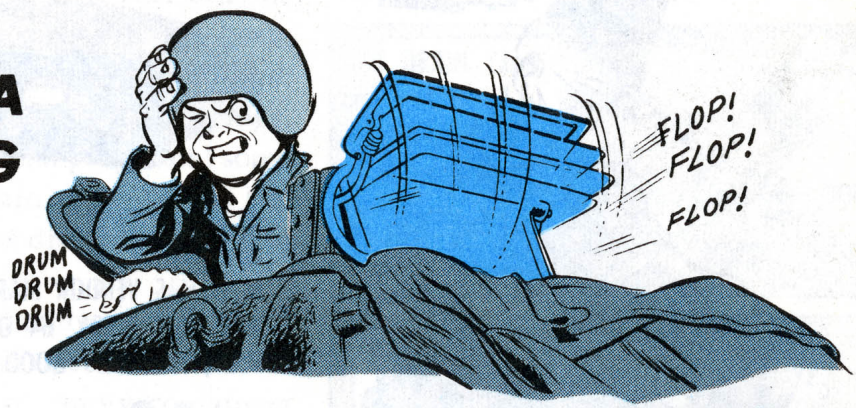

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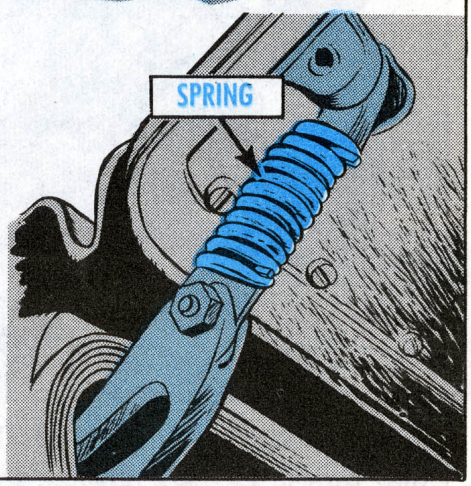
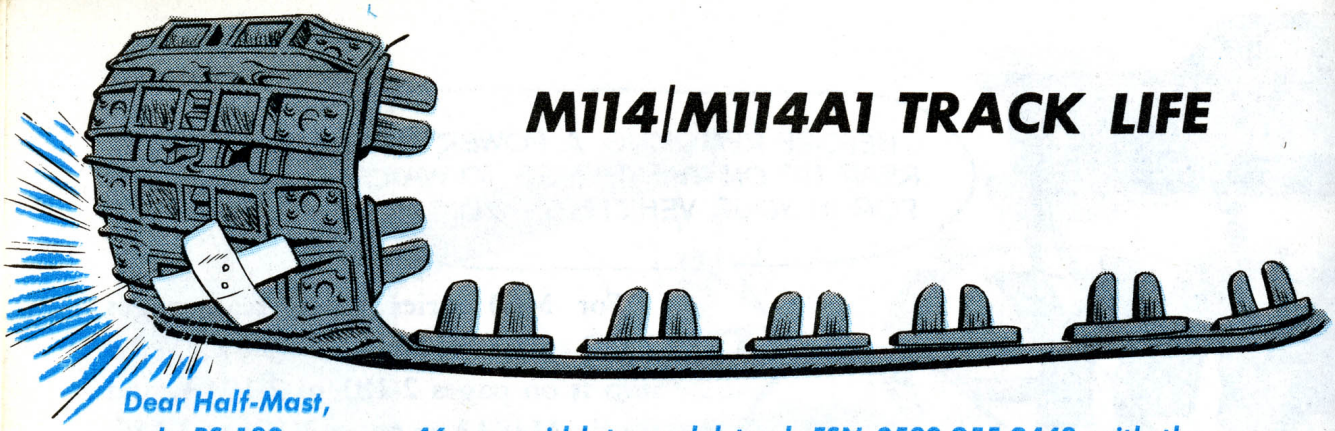




M114/M114A1 TRACK LIFE

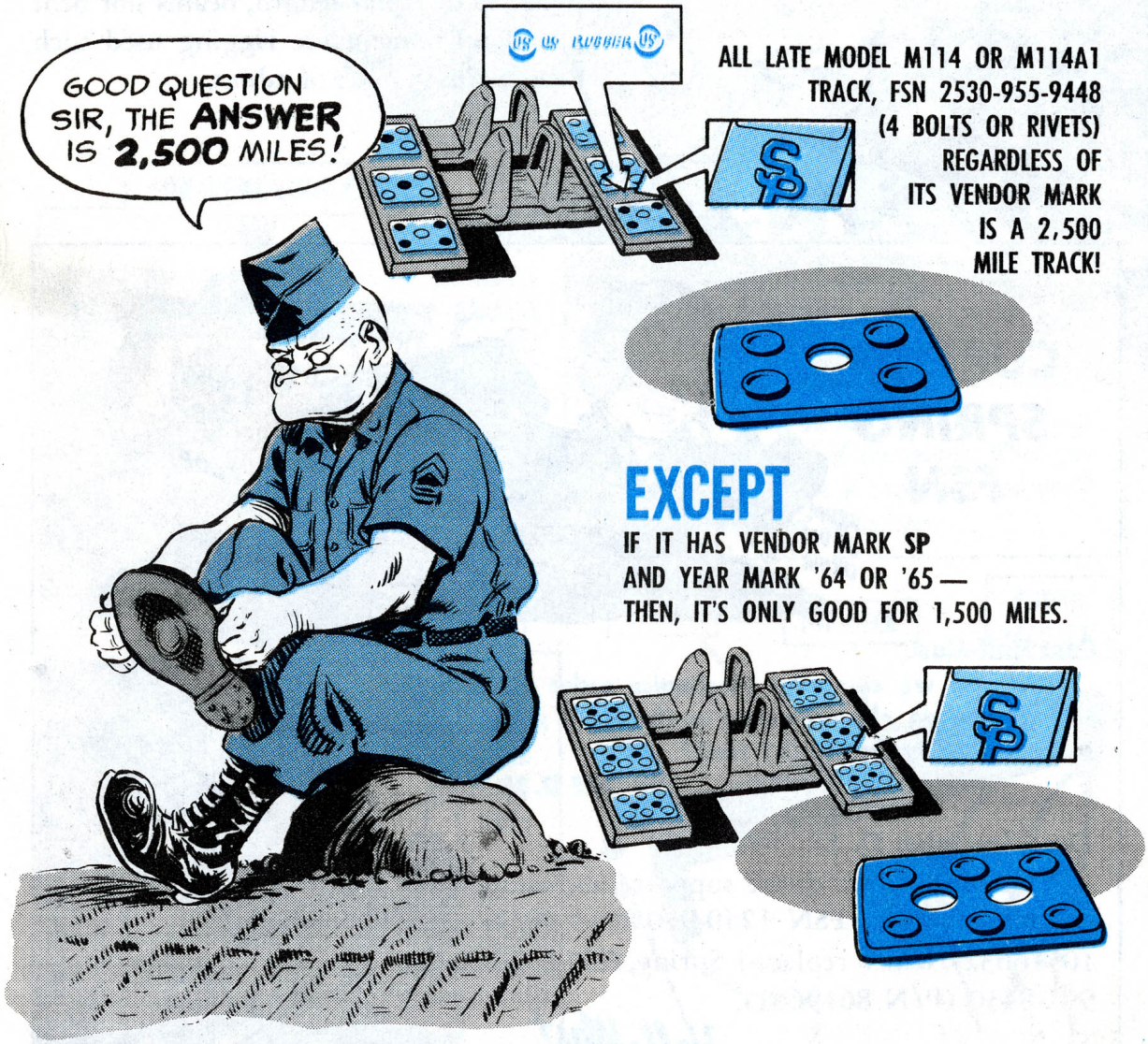
Dear Half-Mast,

In PS 182 on page 46 you said late model track FSN 2530-955-9448 with the vendor mark SP and the year mark 64 or 65 had a safe track life of 1,500 miles.

This is good to know, but my track has vendor mark SP with year marks 66 or 67. What is its safe life?

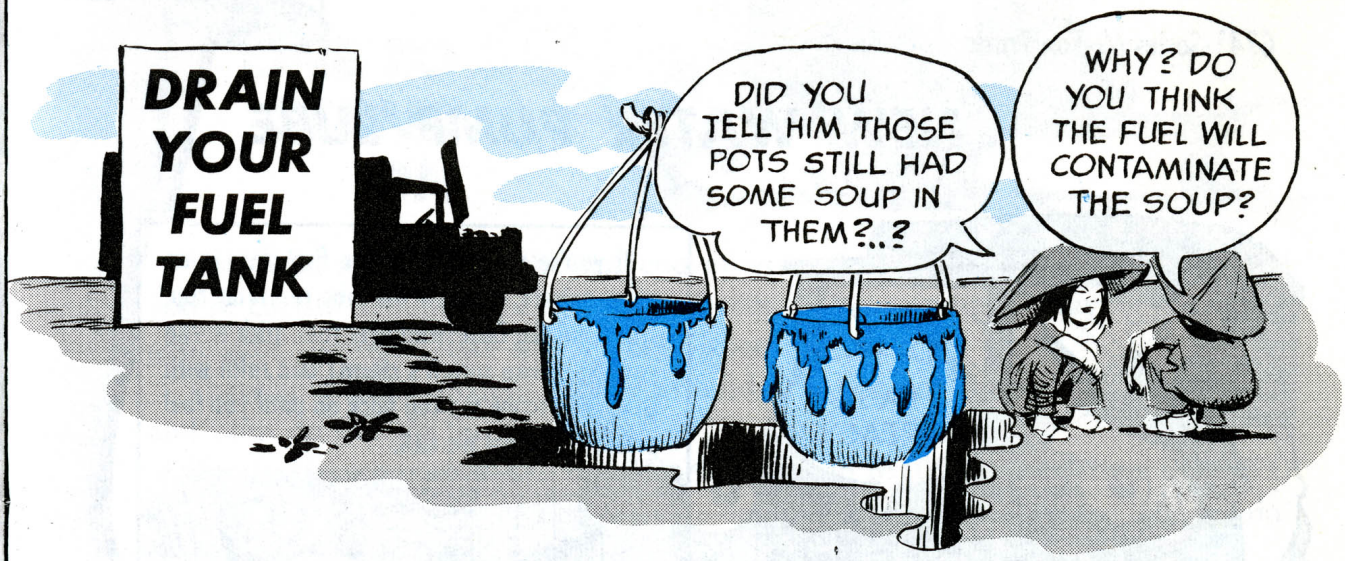
LT K.F.M.

Dear Lieutenant K.F.M.,



Early model track FSN 2530-475-1300 (with 6 bolts or rivets) is good for 1,000 miles. TM 9-2320-224-ESC (Apr 68) has the word.

Half-Mast



All equipment with diesel or multi-fuel engines should have their fuel cells (or tanks) drained empty at least once a year—oftener in wet places like Southeast Asia.

Do the job like it tells you in the -10 TM for your equipment or engine but if both the left and right fuel cells or tanks have drain plugs, pull 'em both.

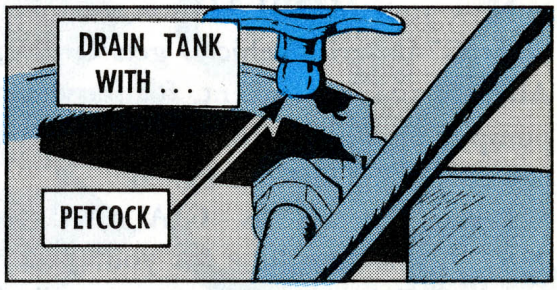
Some cells/tanks have a petcock, some have socket-head drain plugs, some have square-head plugs, and some have no bottom drain at all. In this last case instructions for draining will be in your TM.

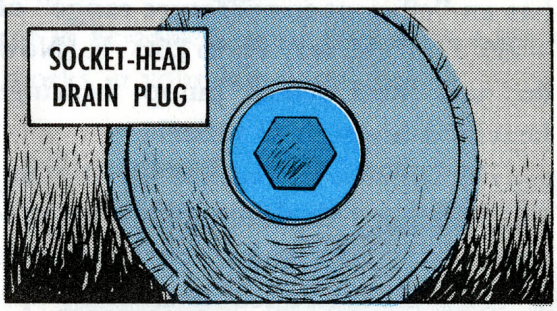
Get most of the fuel out of the cells/tanks before you open the drains. Transfer the fuel to empty containers with the hand fuel pump, but cover the fuel filler opening around the hose with a clean cloth if there's any chance of sand, dust or water getting in the fuel cells/tanks.

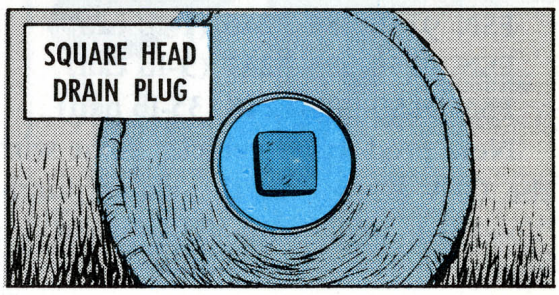
Fuel gets contaminated by water formed by condensation of moisture in the air and by dirt that gets in during fuel loading and storage operations. In fuel injection engines the return of heated fuel to the cell causes added condensation.

The cleaner you can keep the fuel the better your engine will perform and the less chance you'll have of engine failure.

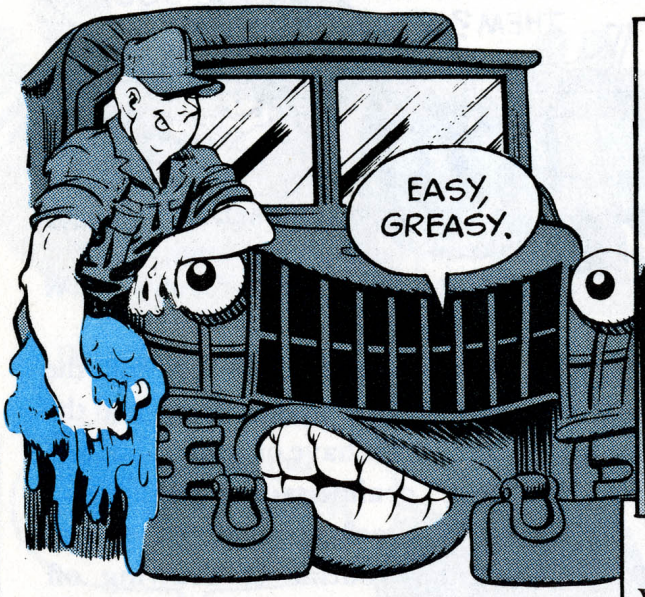
Between drainings on equipment like an M60 tank, you keep on with your regular routine of drawing off condensate with your hand pump as your -10 TM shows you.







NEW WATER PUMP LUBE



Hot news for hot pumps!

Now your M37B1 3/4-ton truck (or other G741-series vehicle) gets Grease, Aircraft and Instrument, for its water pump. This switch from GAA is in the newest LO 9-2320-212-12.

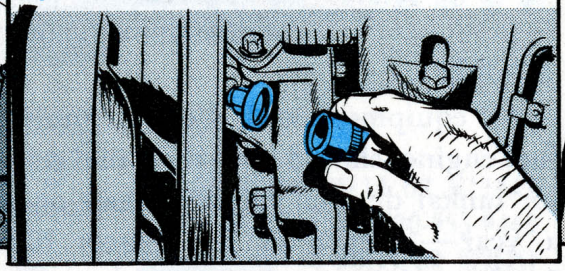
Better known as GIA (MIL-G-23827), this new lube for your pump has an "efficient temperature range" of —65°F all the way up to 250° F. (Now do you hear your pump bearings heavin' a big sigh of relief?)

GIA is listed in Fed Cat C9100 (Sep 67) under a half-dozen FSN's for different size containers, but the ones you're most interested in are:

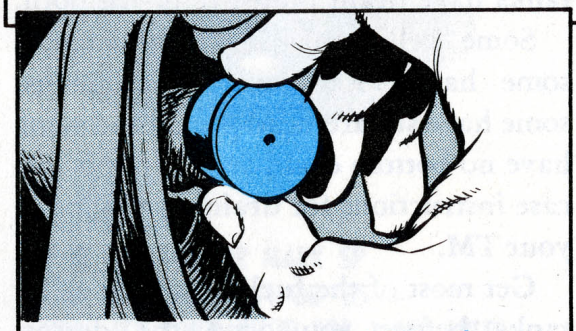
FSN 9150-985-7246 (1-lb can)
FSN 9150-985-7247 (5-lb can)
FSN 9150-985-7248 (35-lb pail)

New production vehicles come with the GIA already in the water pump. You just refill with GIA when it's needed.

If you're using GIA for the first time in an older vehicle, unscrew the lube reservoir cap, scoop out the GAA (whatever tool, stick or rag you use, make sure it's **clean**) and refill with GIA. Then screw the cap back on until you feel pressure against the GIA.



Now you should be kissing off those water pump troubles you've been having—if you give the GIA a chance to do its job.

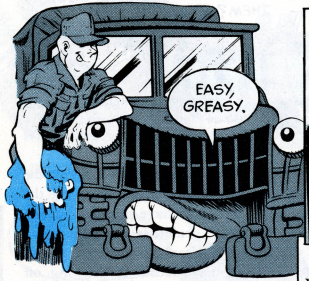


Like your LO says, every 1,000 miles you turn that reservoir cap down a little more—until you feel it pressing against the grease and feeding lube to the bearings.

Natch, when you've screwed the cap all the way down, you put in a new load of GIA.

Remember, there're no longer any repair parts for this pump. When she gives out, all you can do is replace 'er with a new pump—FSN 2930-632-4048, listed in your TM 9-2320-212-20P (Feb 60).

NEW WATER PUMP LUBE



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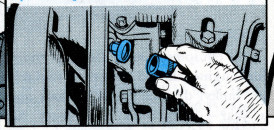
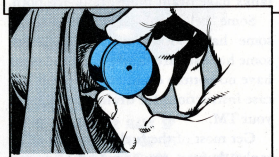


Now you should be kissing off those water pump troubles you've been having — if you give the GIA a chance to do its job.



Like your LO says, every 1,000 miles you turn that reservoir cap down a little more — until you feel it pressing against the grease and feeding lube to the bearings.

Natch, when you've screwed the cap all the way down, you put in a new load of GIA.

Remember, there're no longer any repair parts for this pump. When she gives out, all you can do is replace 'er with a new pump — FSN 2930-632-4048, listed in your TM 9-2320-212-20P (Feb 60).

ONE TO STAND ON

You need a leg under the tail end of your 3/4-ton or 1 1/2-ton trailer if you're cartin' around a hefty hunk of mounted equipment. Maybe yours is a generator, pump, radar set or fuel-dispensing outfit.

There're 2 different legs kickin' around. They're not much different, though, and both do exactly the same job.

One leg was put on 1 1/2-ton M104-series and M105-series trailers by MWO 9-2330-213-30/3 w/Ch 2. The MWO's been rescinded, but the dope'll be comin' out in a TM 9-2330-213-14 revision.

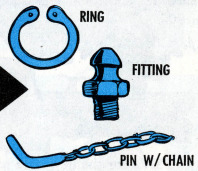
The other leg is in TM 5-6115-365-15 (May 66) for a whole bunch of trailer-mounted generator sets. It's Leg Prop Assy, FSN 2590-318-6691. There're replacement parts listed there, too. The TM authorizes this leg for both 3/4-ton and 1 1/2-ton trailers with the mounted equipment specified.

Parts for the MWO-installed support leg are in TM 9-2330-213-14 (Jan 64). Those "non-supply items" you see on page 159 now have FSN's and're available in the supply system like so:

Item 1 — Ring, FSN 5340-803-7303 (MS 9013-19), listed in Fed Cat C5340-IL-A (Nov 67)

Item 2 — Fitting, FSN 4730-050-4208 (MS 15003-1), in Fed Cat C4730-IL-A (Mar 68)

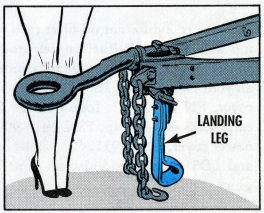
Item 4 — Pin w/Chain, FSN 2540-679-6968, Fed Cat C2540-IL-A (Jan 68)



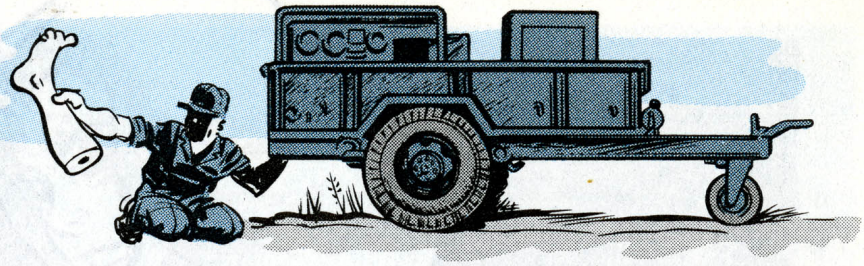
Even with a support leg you don't want to be parkin' your trailer on a slope —you might wind up with the whole works in your lap.

¾-Ton Trailer . . . LEG WATCHER

Keep an eye on your M101A1 3/4-ton trailer's landing leg. There've been some cases of the bracket bustin' and droppin' the front end of the trailer. Check it for cracks. Got a bad one? Get a new one — Bracket, FSN 2530-733-9353, in TM 9-2330-202-14P (Aug 62).



ONE TO STAND ON



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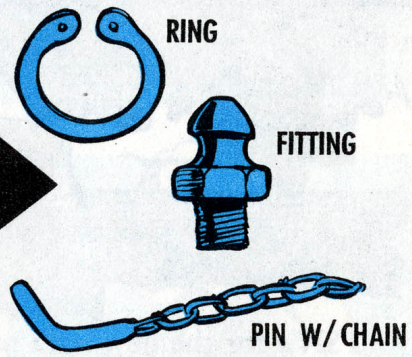

Even with a support leg you don't want to be parkin' your trailer on a slope —you might wind up with the whole works in your lap.

3/4-Ton Trailer . . . LEG WATCHER

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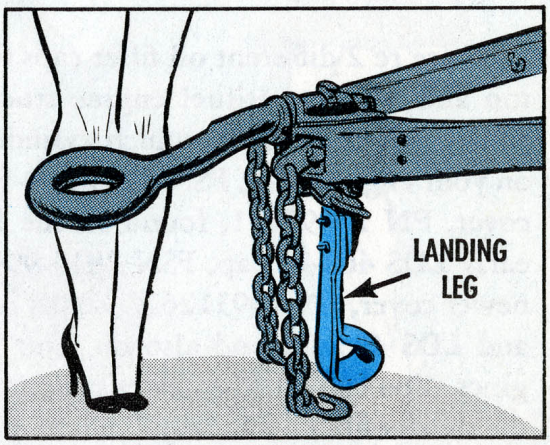
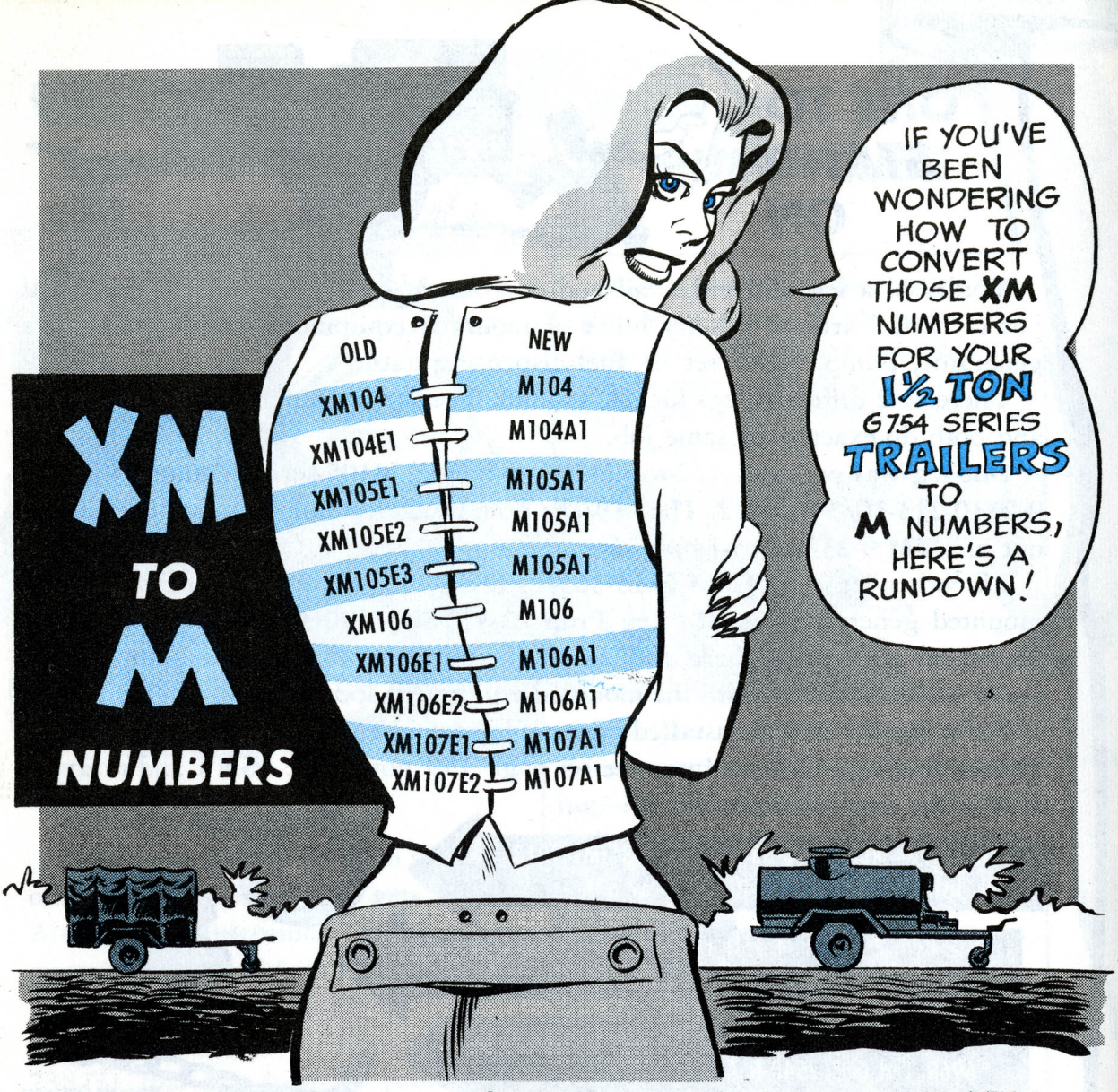
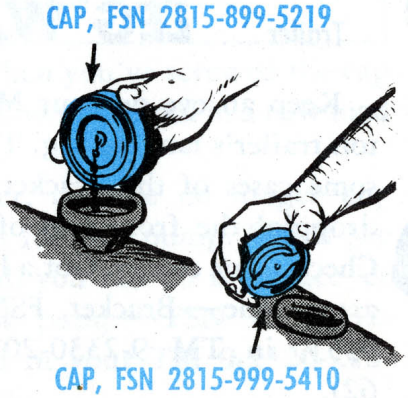




FSN's for the new data plates and mounting screws are on page 157, TM 9-2330-213-14 (Jan 64).

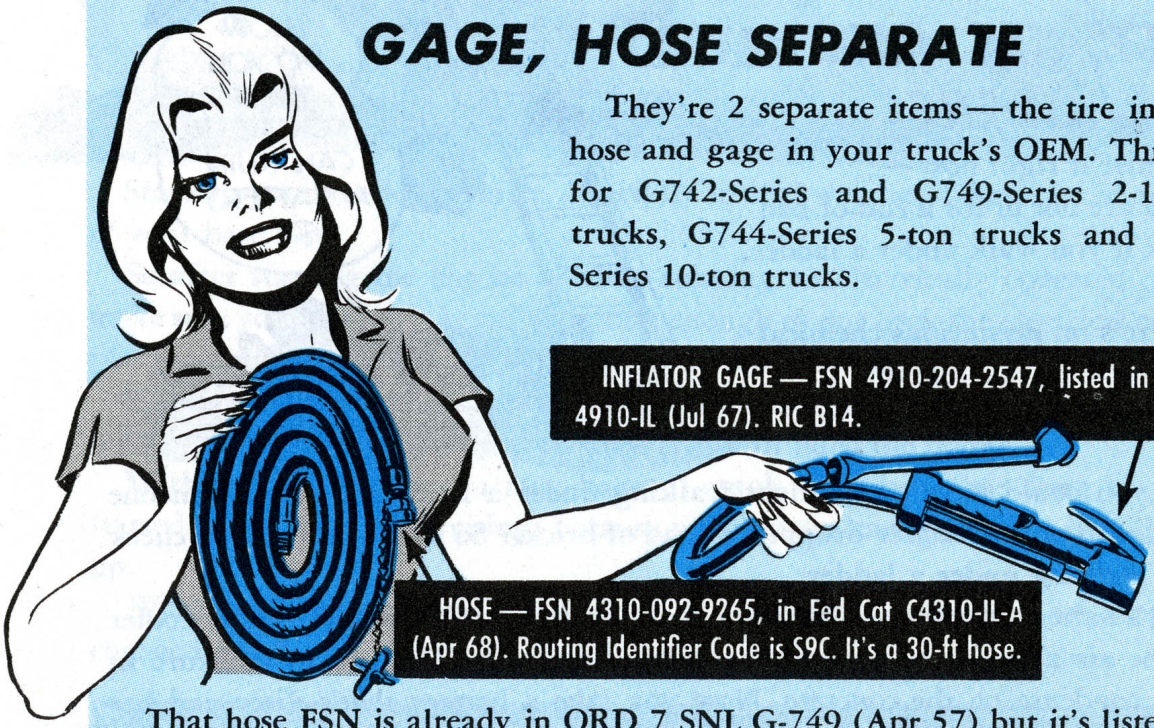
CAPS FOR MULTIFUELS

There're 2 different oil filler caps for those 2-1/2-ton and 5-ton multifuel engine trucks. Which cap you've got depends on which cylinder head cover's on your engine. Cap, FSN 2815-899-5219, goes with cover, PN 10899131, found on the LDS 427-2 and early LDS 465-1. Cap, FSN 2815-999-5410, fits the newer cover, PN 10951262, usually on the LD 465-1 and LDS 465-1A and also on later LDS 465-1 engines. You can tell the newer cylinder head cover by the shorter filler neck.



2½-, 5-, 10-TON TRUCKS...

GAGE, HOSE SEPARATE

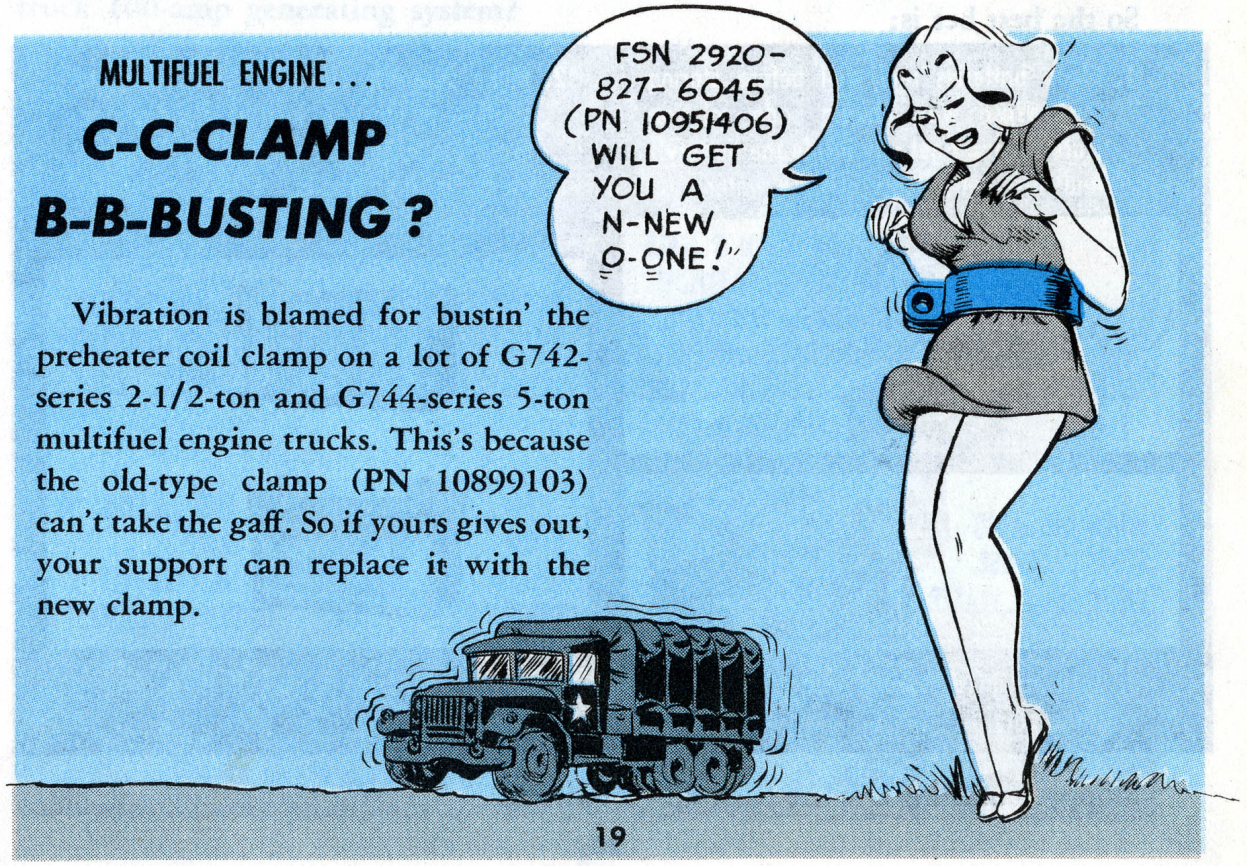


They're 2 separate items — the tire inflation hose and gage in your truck's OEM. This goes for G742-Series and G749-Series 2-1/2-ton trucks, G744-Series 5-ton trucks and G792-Series 10-ton trucks.

That hose FSN is already in ORD 7 SNL G-749 (Apr 57) but it's listed only for the M221 truck tractor. There's no use trying to get the old hose-and-gage assembly, either FSN 4910-789-0452 or FSN 4910-777-2943. Your requisition will just be canceled.

MULTIFUEL ENGINE...

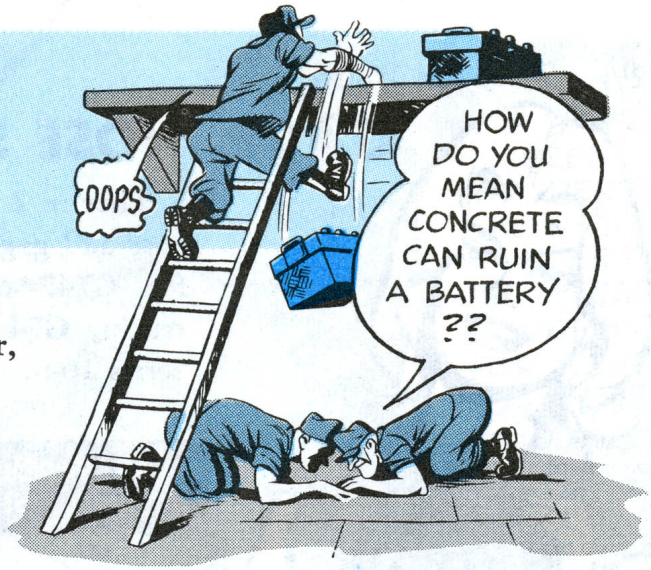
C-C-CLAMP B-B-BUSTING?



Vibration is blamed for bustin' the preheater coil clamp on a lot of G742-series 2-1/2-ton and G744-series 5-ton multifuel engine trucks. This's because the old-type clamp (PN 10899103) can't take the gaff. So if yours gives out, your support can replace it with the new clamp.

'BOUT THAT DAMP CONCRETE . . .

BATTERIES AND LADDERS



Let's settle it right now—

1. You are not in for a run of bad luck if you walk under a ladder, and . . .
2. There's no mysterious chemical or magic in concrete that'll discharge a storage battery.

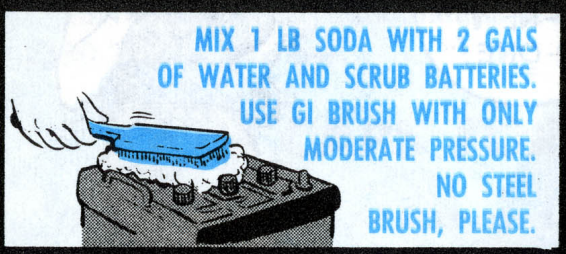
But you could have an accident walking under a ladder. What if someone working up on the ladder dropped a load of bricks? So it's a good idea to check before walking under a ladder.

And a battery standing on concrete could discharge. Concrete is usually cooler than the air above it because of the ground under it. This makes moisture in the air condense on the concrete. Now you take a battery that's dirty and has electrolyte slopped all over it. Set it on damp concrete. Sure it'll discharge! And spilled electrolyte won't do the concrete any good either.

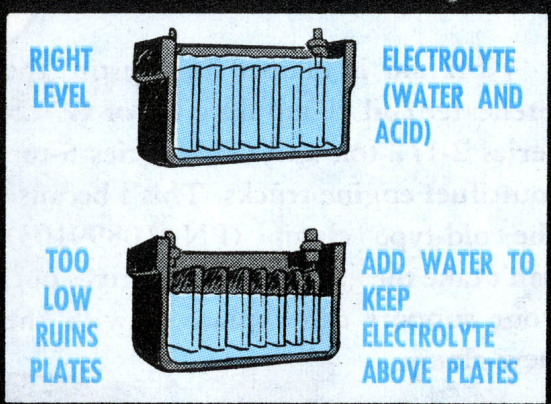
A battery will discharge anywhere if you give it long enough. A sorry, neglected battery will fade faster.

So the best bet is:

1. Clean batteries real well before storing 'em. Wash with baking soda solution (careful! don't get any inside the battery!) and rinse with plenty of fresh water.



2. Make sure the electrolyte level's up to snuff — at least 3/8 inch over the plates. Bring 'em up to full charge — 1.225 maximum in the tropics, 1.280 in cooler climates.



3. Set 'em on dry wood — not concrete — and check 'em real often to see if they need recharging.

Sloppy handling is what runs down batteries.

TIPS ON BATTERIES

Starting your tracked vehicle, 'specially in cold weather, takes a lot of zip out of your batteries.

So after starting the engine or after running an electrically operated turret, make sure your engine is kept going long enough to put back the electrical charge you took out of the battery — half an hour should do it.

Trying to start a vehicle with weak batteries can make your starter relay chatter. If this happens you may get arcing that will burn the points.

With weak batteries you may have to crank the engine too long to get it started. This is no good, either, because your starter can get so hot it will seize up.

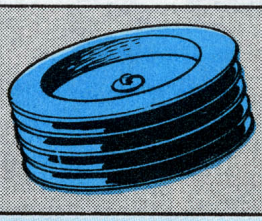
Weak batteries can ruin other parts of your electrical system, so keep 'em charged up.

3/4-Ton Truck . . . PULLEY POOP

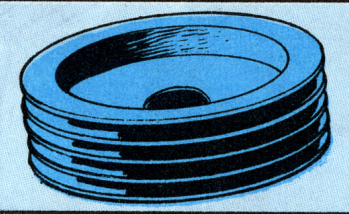
You got a beat-up, battered or busted pulley in your G741-series 3/4-ton truck 100-amp generating system?

Here're replacements for those 4-groove pulleys you got in the kit, FSN 2920-562-0414, under MWO ORD G741-W12 (superseded by C3, Jan 68, TM 9-8031-2 and C2, Jan 68, ORD-8 SNL G-741).

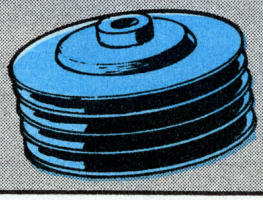
Pulley, fan drive and crankshaft, FSN 2805-517-0835, in Fed Cat C2805-IL-A (Apr 67) — also in ORD 8 SNL G741 (Jan 57) under Army PN 8699737.



Pulley, generator, FSN 2920-289-7678, listed in TM 9-2320-212-20P w/Ch 1 (Nov 62) and Ch 2 (Jul 64)



Pulley, fan and water pump, FSN 2930-200-1395, in ORD 8 SNL G741.

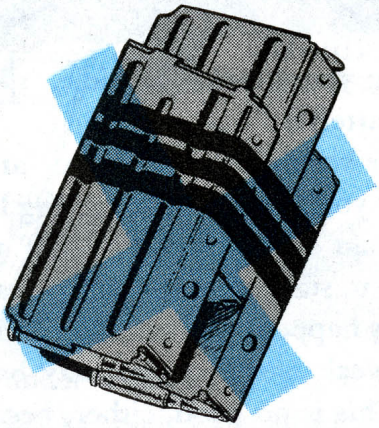


TAPING'S TOO RISKY

Dear Half-Mast,

Some guys in our company tape 3 loaded magazines together like this when they head into action. They claim it gives 'em more instant firepower for their M16A1 rifles. Do you think it's a good idea?

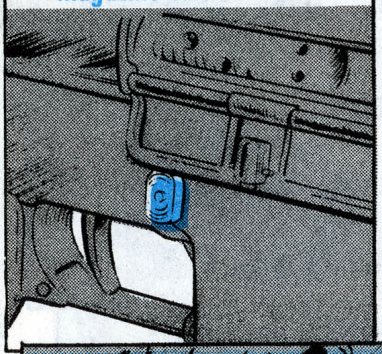
SP6 L.O.F.
APO San Francisco



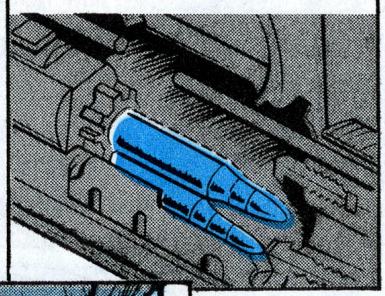
Dear Specialist L. O. F.,

No . . . much too risky! Here's why:

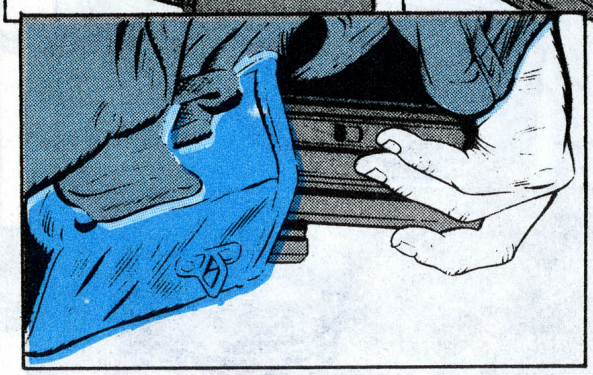
1. The weight of the 2 added magazines could bust the magazine catch.



2. The downward pull of 3 magazines like that will cause feeding problems.



3. Exposing the open ends of the 2 extra magazines lets dirt and glop in, especially when you're belly-crawling. The tape itself could slow you down if it gets snarled on your magazines.

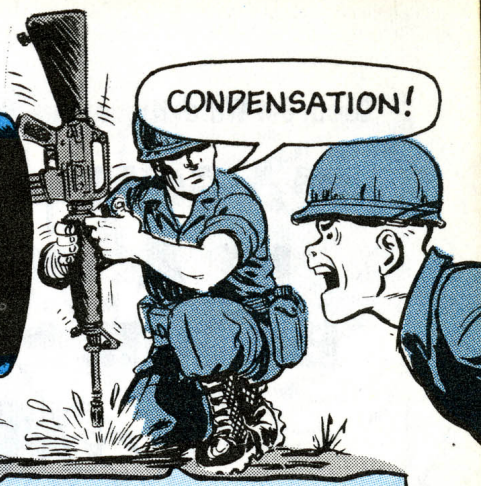


The best way's still the one in your FM 23-9. Keep your spare magazines in your pouch and whip 'em out and into your weapon as you need 'em.

The pouch'll protect the mags and the ammo and you won't be putting a strain on your weapon.

Half-Mast

M16A1's FIGHTING CAP

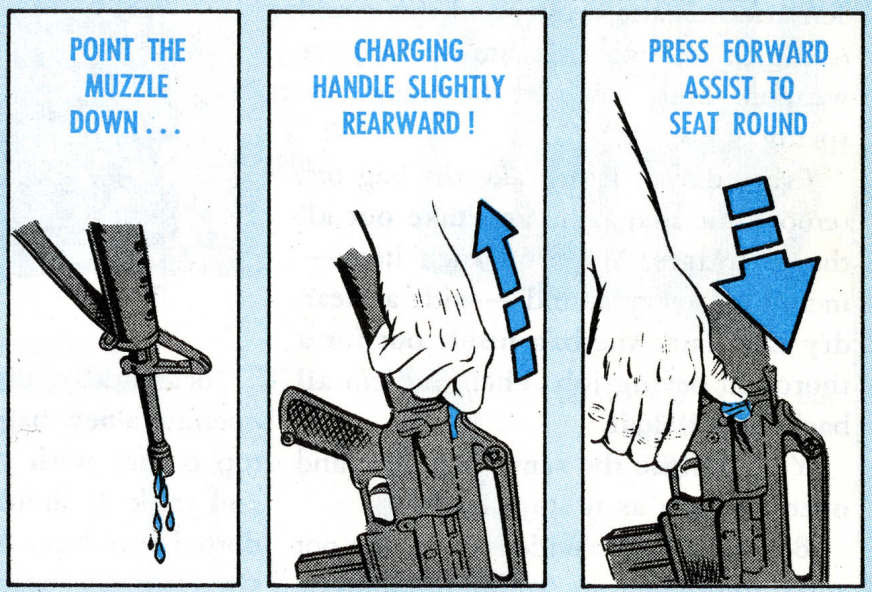


Yep, "fighting's" the word.

You only use these new plastic protective caps (FSN 5340-880-7666) when you're in action . . . not when your shooter's put up for a day or more. Else condensation'll build up and ruin the bore.

The cap'll keep out rain, dust and dirt, but it won't keep water from seeping into the bore from the chamber end when your rifle gets dunked. This water's got to be removed before you try to fire.

HERE'S WHAT YOU DO! . . . AFTER YOU REMOVE THE CAP.



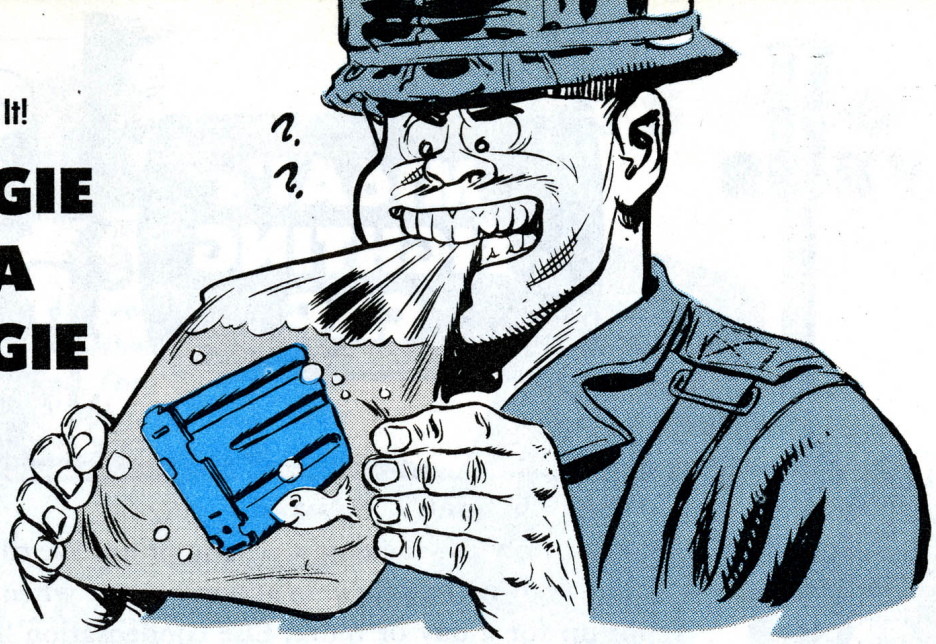
So get with that routine in para 2-11 to your new-12 TM before you fire off.

Make sure the drain hole in your butt stock cap screw is not plugged when you drain the bore.

It's OK to fire right through the cap if you don't have time to remove it first, but never put a cap on a hot weapon. The plastic will go soft and get into the flash suppressor grooves and will be hard to get off.

Good, But Watch It!

MAGGIE IN A BAGGIE



It's real smart to use a plastic bag (FSN 1005-052-6942) to protect your M16A1's loaded magazine from dirt, dust, rain and the like — but watch one thing!

The bag's apt to collect water condensation on the inside, and this could result in feeding wet ammo to your weapon and rusting the magazine spring.

Every day at least, take the bag off, remove the magazine and take out all the cartridges. Wipe off each item — including every round — with a clean dry rag. Turn the bag inside out for a thorough drying job. Then put 'em all back. This'll do it.

You can use the same bag over and over, as long as it stays healthy.

Because of the condensation, it's not smart to store empty mags in these bags.

Incidentally, there's a little trick to opening a new bag in a hurry. Grab the top corner with your fingers or teeth and yank. It should separate along the dotted tear line. A slow tug will only stretch it.

MOONLIGHTING?

The lens cover for your AN/PVS-2 Starlight Scope has been known to reflect moonlight — and that tell-tale light can give away your position. When you near your mission location, slip the lens cover into your pocket. The recessed lens is less likely to reflect light.

DUAL DUTY RACK

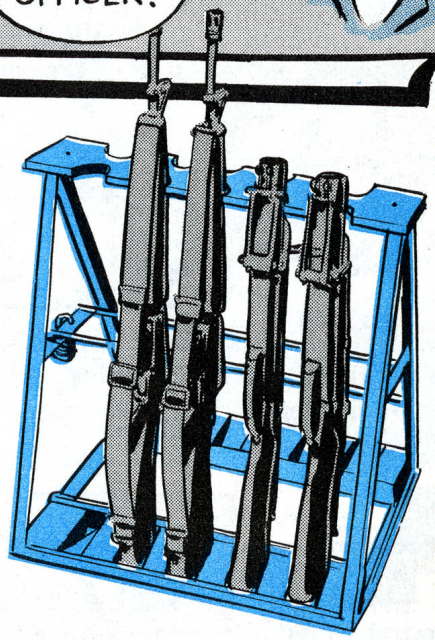
Dear Half-Mast,

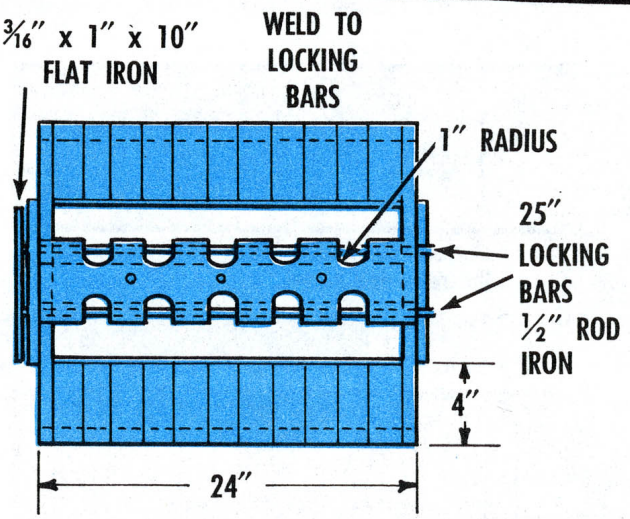
Here's an arms rack that outfits at our post use for M79 grenade launchers and/or M16A1 rifles The beauty of it is that it doesn't take up much arms room space.

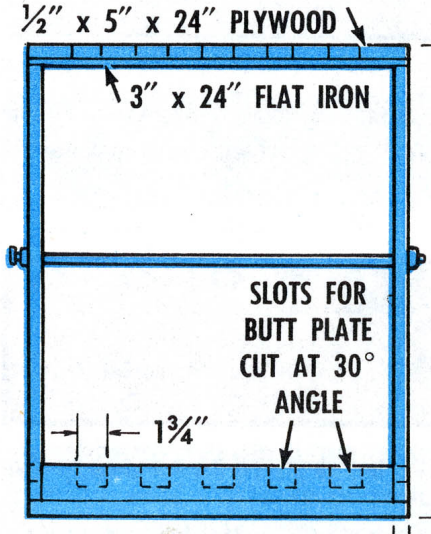
Any support shop can make it easy from these plans.

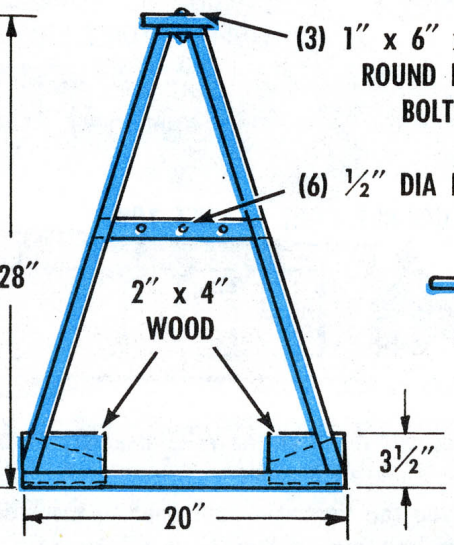
George Nihart, AWCMS
Fort Benning, Georgia

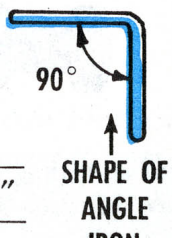
THE USE OF THESE RACKS MUST BE APPROVED BY YOUR SECURITY OFFICER.





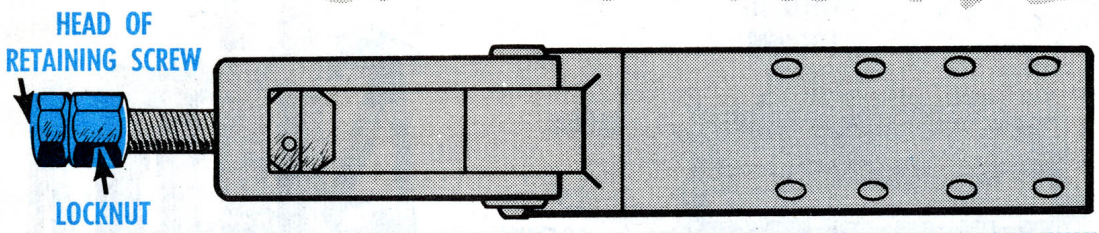






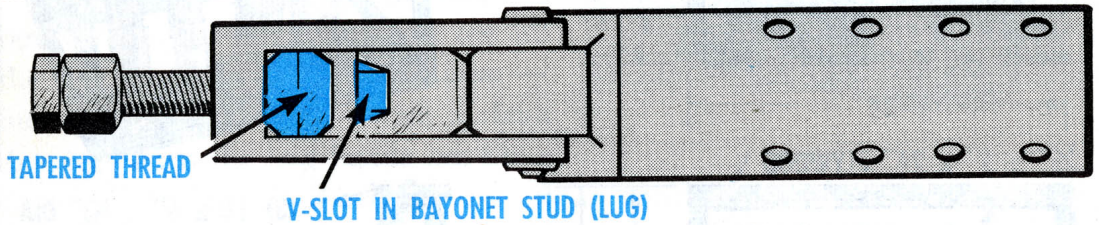
RIGHT WAY IS BEST WAY

Sure, it'd be nice to have a loss-proof muzzle stabilizer on your M14A1 rifle. But till they come up with one, the best you can do is to make sure your present one won't work loose. This means putting the stabilizer on the right way.

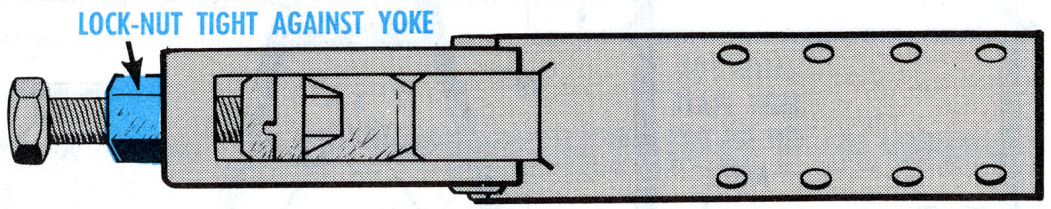


First . . . run the lock nut up against the head of the retaining screw.

Then put the stabilizer over the flash suppressor and slip the yoke assembly over the bayonet stud.



Next . . . use your fingers to turn the retaining screw so that the tapered stud at the end of it goes into the V-slot in the bayonet stud. Tighten the retaining screw with your combination tool.



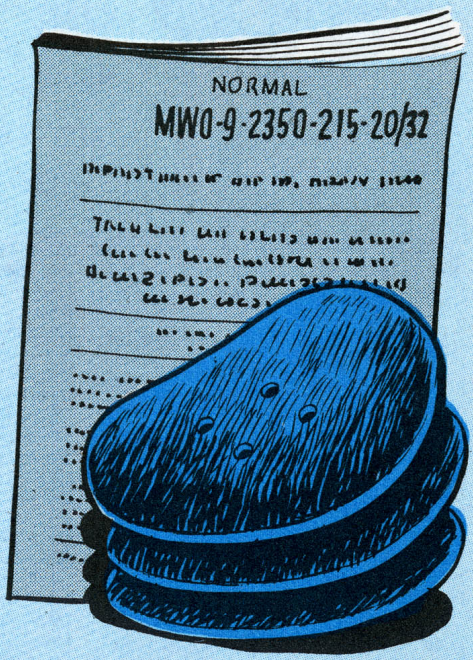
Push up and down on the yoke assembly to make sure it has no give. If it's not loose, you've done everything right so far.

Now you can tighten — real good — the lock nut against the yoke. This keeps the retaining screw from coming loose during firing.

M60 AMMO RACK PADS

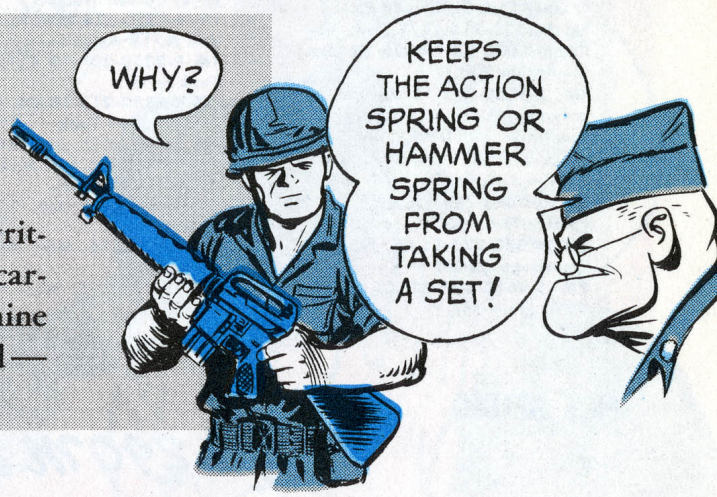
Stop sweating out the chance of a loose primer falling through the drain hole in your M60-series tank's ready rack mat and blasting off on the battery terminal.

Tip your mechanic to hex-removing MWO 9-2350-215-20/32 (18 Dec 67). Now he can make a new set of rubber mats with 4 holes instead of the one big one. The modification's for M60 tanks with serial numbers from 5 through 2209 and M60A1's from 2210 through 4379.



CLOSE BOLT FOR STORING

You'd be smart to obey this unwritten law: Always put your rifle or carbine in the arms rack or your machine gun on the shelf with the bolt closed—uncocked.



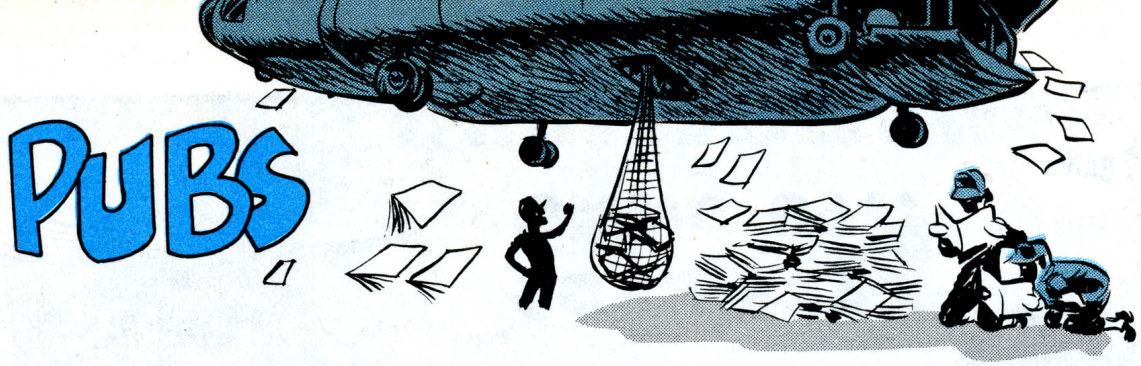
CHROME OFF IT

Mr. M14-series armorer . . . this is for you.

Any time you put a chromed firing pin in the bolt and it binds just forward of the shoulder of the tang (because of chrome build-up) . . . try this:

Fire the rifle a couple of times—dry or live. Or work the firing pin in and out of the bolt by hand a time or three.

If one of those deals doesn't stop the binding, a new firing pin is the answer.



This is a selected list of recent pubs of interest to organizational maintenance personnel. The list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4, Ch 5 (Feb 68), TM's, TB's, etc.; DA Pam 310-6, Ch 3 (Apr 68), SC's and SM's; DA Pam 310-7 (Apr 68), MWO's.

TECHNICAL MANUALS

TM 3-1040-214-12 C4, Apr, M3 Disperser.
TM 5-200, Apr, Camouflage Net Sets.
TM 5-2420-218-15, May, Tractor Whld DED W/Backhoe and Front Loader.
TM 5-3610-223-12, Jun, Offset Platemaker and Copier.
TM 5-3810-233-ESC, May, 5-Ton DED Wheel Mtd Crane; Air Trans W/Bulldozer Blade; 24 ft Crane Boom Hanson Mach Mdl H446.
TM 5-3820-205-10/1 C1, Jun, Roll Crusher Rock Drilling Equip.
TM 5-3820-233-12/1, Jun, Jaw Crusher DED 35 Ton Per Hr Cap Semitrailer Mtd.
TM 5-3820-233-12/2, Jun, Crusher Screening Unit 35 Ton Per Hr Cap Semitrailer Mtd DED.
TM 5-3895-272-12 Ch 1, Jun, 10-29 HP M.S. Gas Engines.
TM 5-3895-273-12 C1, Jun, 10-20 HP Gas Eng.
TM 5-4320-222-15 C2, Jun, Centrifugal Pumps.
TM 5-4610-203-12 C5, Jun, Water Purification Unit.
TM 5-4930-217-14, May, Lubricating and Servicing Unit Power Operated Trailer Mtd 23 CFM Comp Recip Gas Drvn.
TM 5-6125-200-15, May, 60 KW Motor Generators.
TM 5-6665-200-12, Jun, Land Mine Detecting.
TM 5-6675-214-15P, Jun, Mapping and Surveying Equip.
TM 9-1005-223-20 C3, Jun, M14 M14A1 Rifles.
TM 9-1010-202-20P, May, 57-MM M18A1 Rifle.
TM 9-1015-215-12 C2, Jun, M30 4.2 Inch Mortar.
TM 9-1025-200-12 C2, Jun, M114A1 M123A1 155-MM Howitzer.
TM 9-1410-250-15P/2/1, Jun, Nike-Herc.
TM 9-1430-513-12/2 C3, Jun, Hawk.
TM 9-2300-224-10/2/1 C7, Jun, M113A1 Carrier Family.
TM 9-2300-257-ESC/5, Apr, M125A1 Mortar Carrier.
TM 9-2320-206-10 C1, Jun, G792-series 10-Ton Truck.
TM 9-2320-218-20P, Apr, M151 Truck and M718 Ambulance.
TM 9-2350-201-12 C11, Jun, M41 Tank Series.
TM 9-2350-215-10 C4, May, M60/M60A1 Tank.
TM 9-7022 C17, Jun, M48A2C Tank.
TM 9-7218 C9, Jun, M42 M42A1 Twin 40-MM AA SP Gun.
TM 9-8030 C9, Jun, G741-series ¾-Ton Truck.
TM 10-500-16, May, Airdrop Load Data.
TM 10-1101 C5, May, Petroleum Handling.
TM 10-4320-202-15, May, Pumping Assy Flammable Liquid Bulk Transfer 50 GPM.
TM 11-5895-464-15, Apr, AN/MSC-32A Central Communications Operations.
TM 11-6625-358-15, Jun, Signal Generators.
TM 11-6625-457-15, May, TS-710A/TSM Crystal Unit Quartz Test Set.
TM 11-6625-1686-15, May, TS-2609/U Radio Frequency Power Test Set.
TM 11-6625-1730-12, May, AN/GSM-206 Radio Data Set Test Set and AN/GSM-207 Antenna Orientation Set.
TM 11-6720-236-12, Jun, KA-76A Still Picture Camera.
TM 750-16 C1, Jan 105-MM M101 M101A1 XM102; 155-MM M14A1 M123A1 Howitzers.

MISCELLANEOUS

DA Pam 750-30, Jun, M16A1 Rifle Operation and PM.
LO 5-2805-213-12, May, 14 HP Gas Engine.
LO 5-3610-229-12-2, May, Webb-Fed Offset Printing Press.
LO 5-4610-221-12, Jul, 1500 GPH Water Purification Unit Van Mtd Elec Drvn 1/20 to 2 HP.
LO 9-1450-500-12/1 & -12/2, Jun, Hawk-Loader-Transporter.
LO 9-2300-224-12/2/7, May, M548 Cargo Carrier.
TB 5-6100-201-15, Jun, Elec Gen Equip.
TB 9-4940-325-30, Jul, Shop Equip Contact Installation in M151.

EIR'S NEEDED

To Get 290M Fix Speeded

All users of 290M tractors — calling all 290M jockeys:

Report every air filter cartridge failure you get — fastest. The top shop thinks those cores, FSN 2940-968-1794, that bust up are wrecking piles of engines.

But what's needed is the hot word from you. There're hundreds of engines at $8,000 each going blam. Your EIR's could help stop it.

And if filters do go blooey, change 'em suddenly — even if it means one every hour. Then send the info surest — got it?

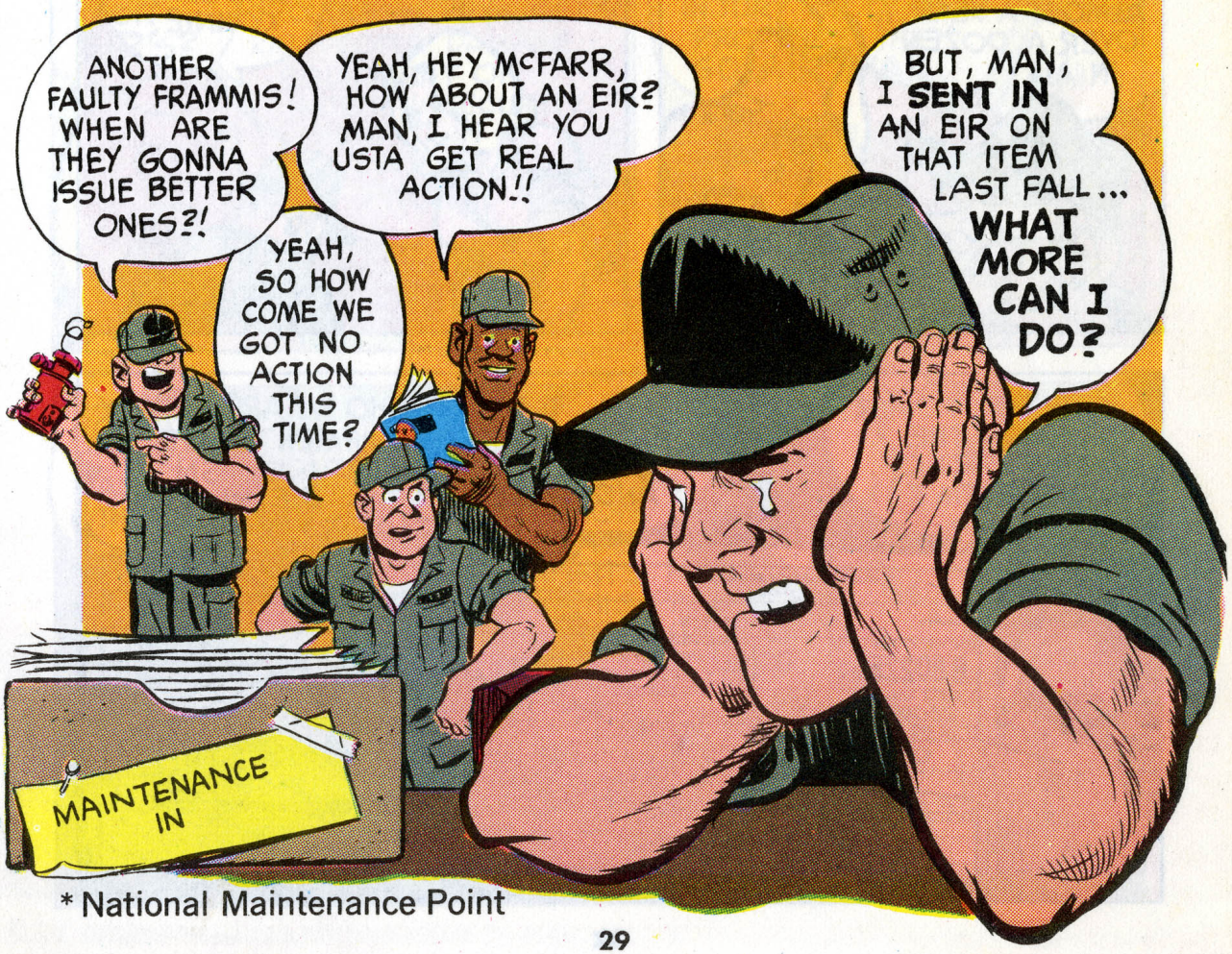
JOE'S DOPE

THE 'SECRET' OF THE EIR

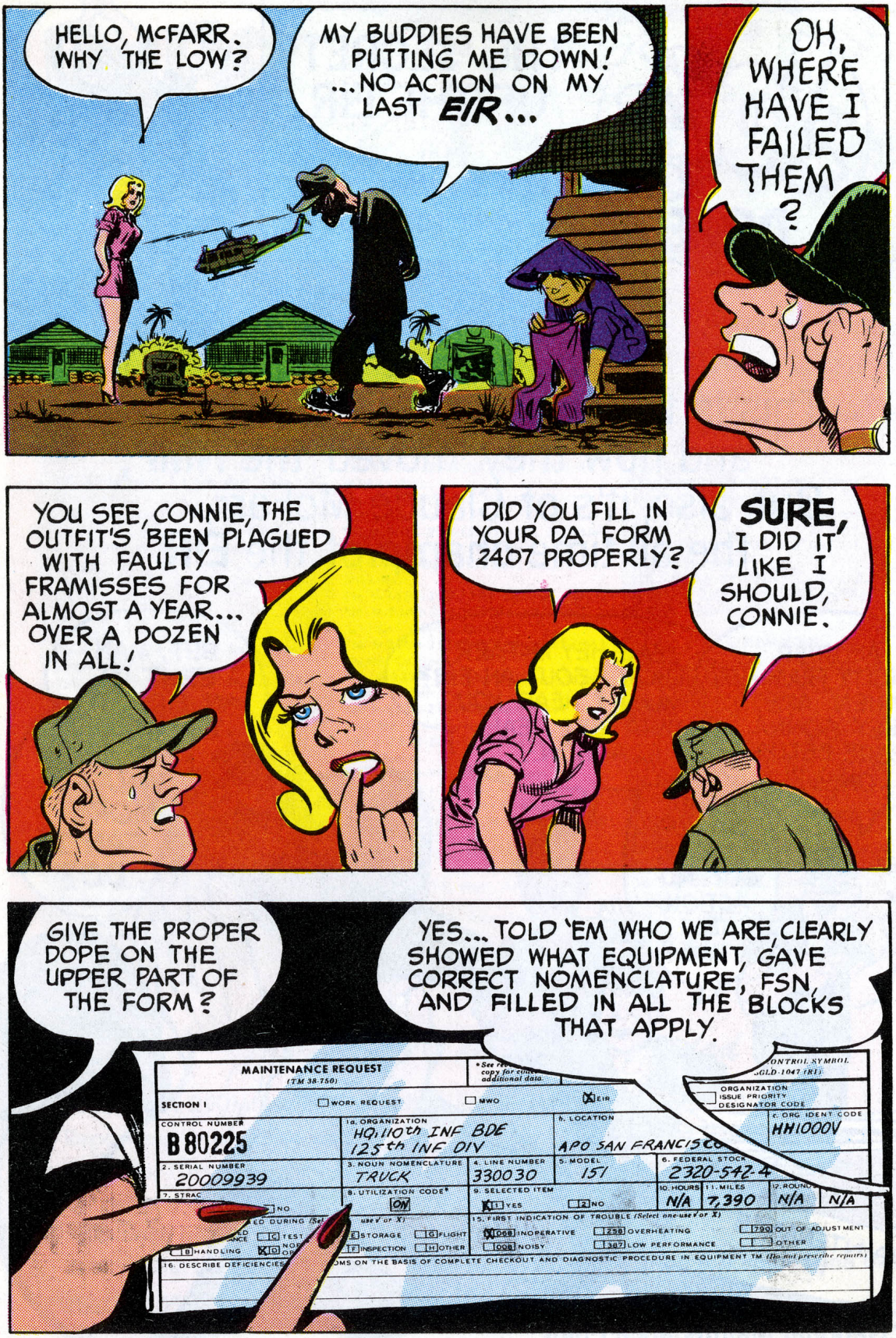
OR

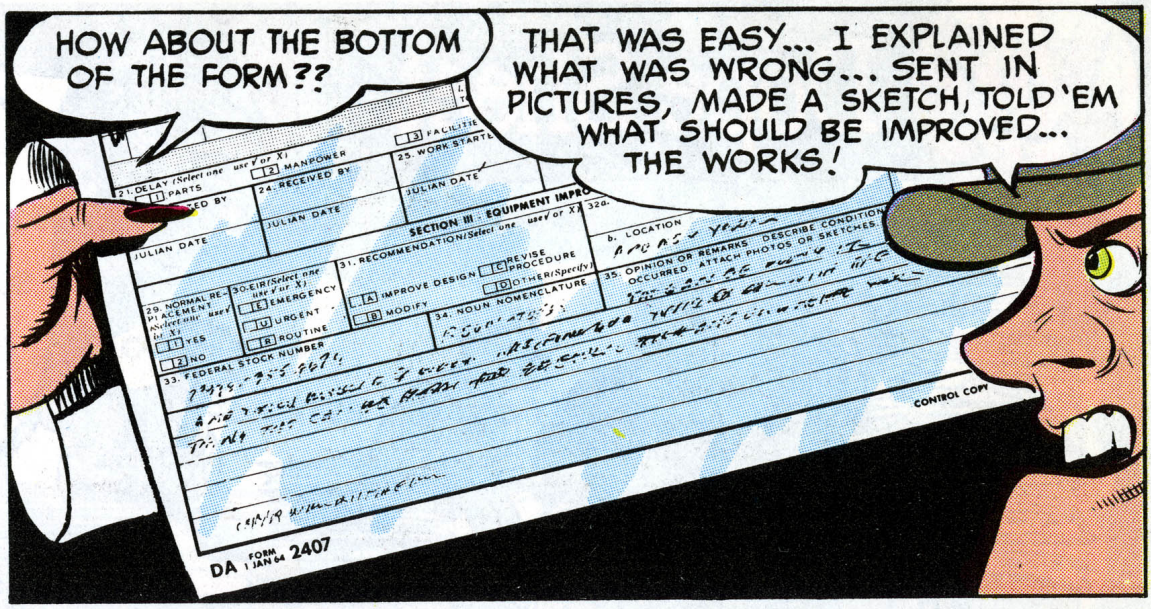
HOW TO MAKE 'EM WORK FOR YOU

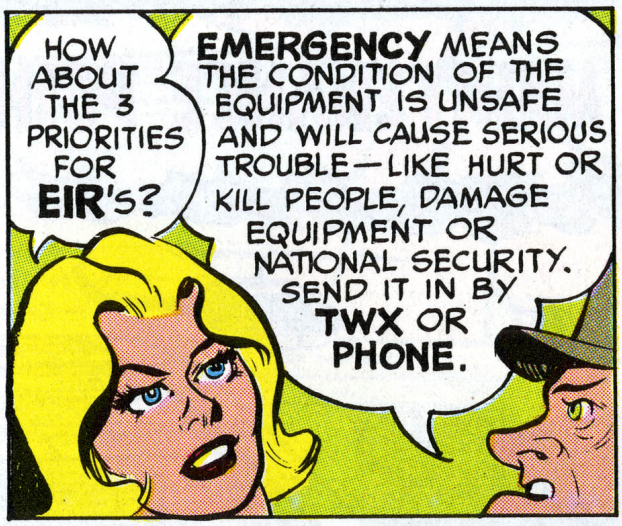
This is the tale of outfit "B"
and how they 'moved' the **NMP,***
But, also, it's of Claude McFarr,
the all-time champ of the **EIR.**



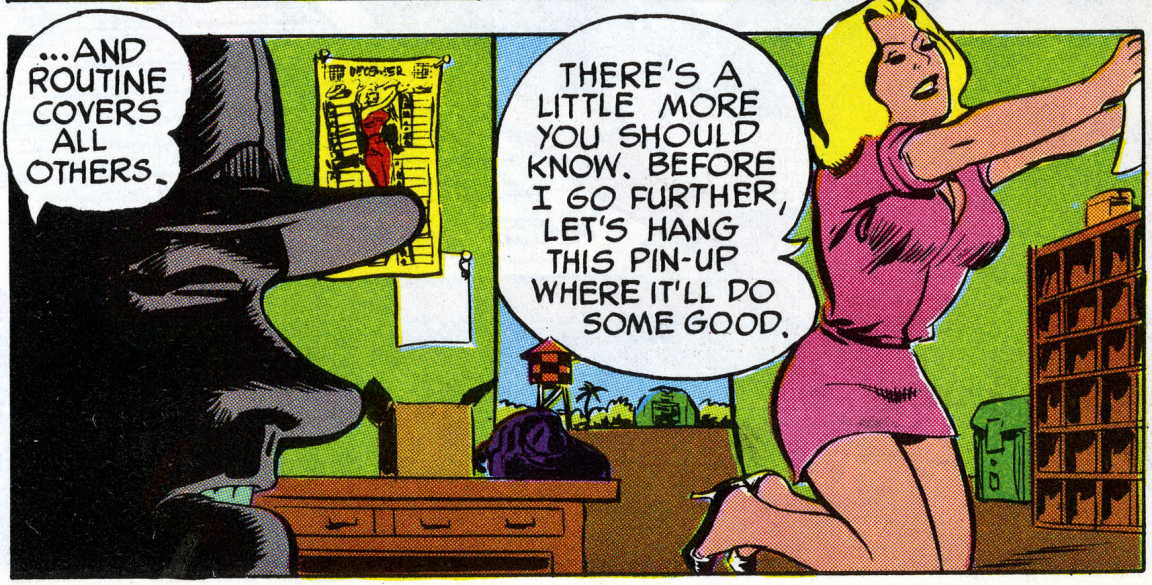
* National Maintenance Point

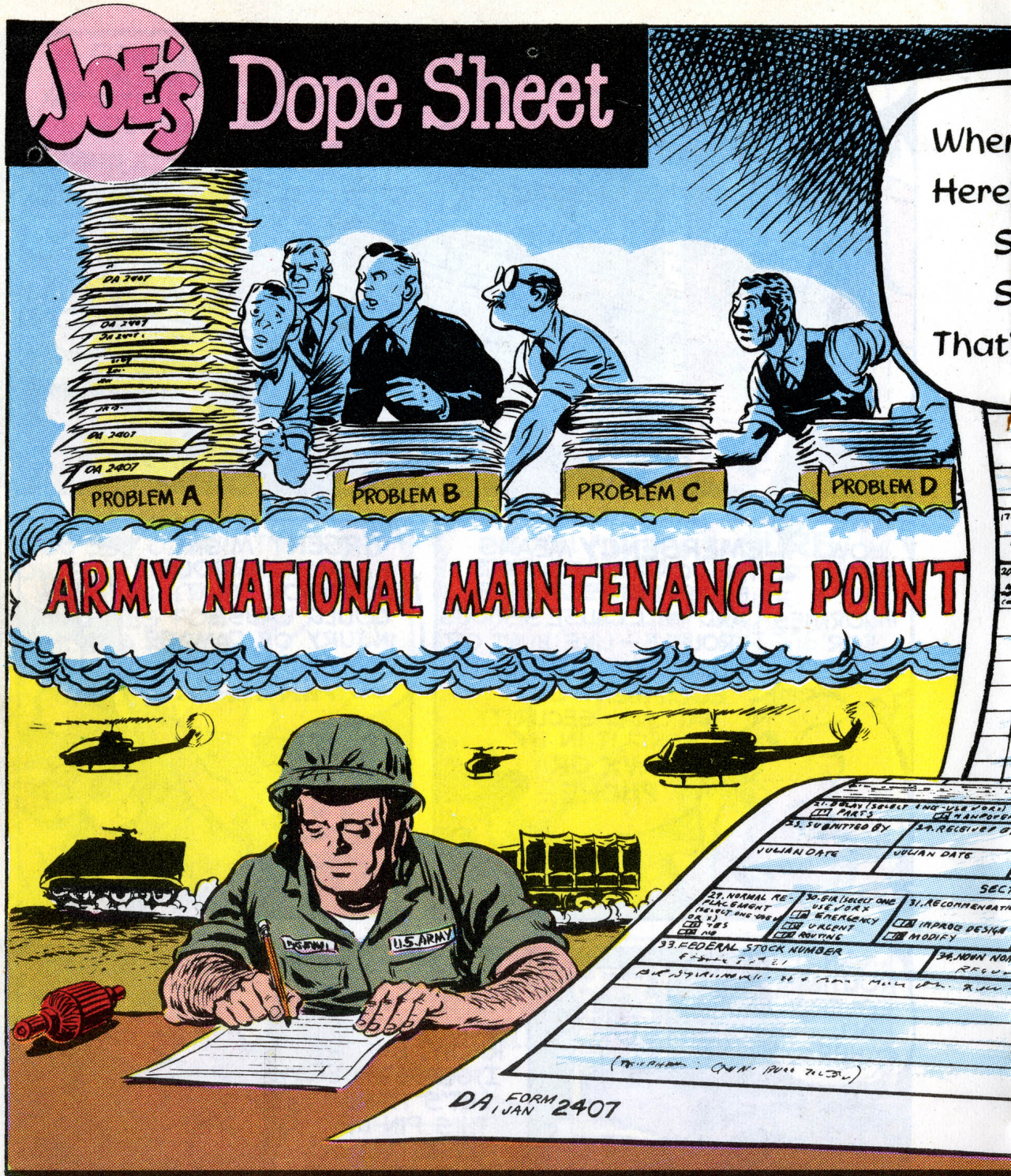

HELLO, McFARR. WHY THE LOW?
MY BUDDIES HAVE BEEN PUTTING ME DOWN! ...NO ACTION ON MY LAST EIR...
OH, WHERE HAVE I FAILED THEM?
YOU SEE, CONNIE, THE OUTFIT'S BEEN PLAGUED WITH FAULTY FRAMISSES FOR ALMOST A YEAR... OVER A DOZEN IN ALL!
DID YOU FILL IN YOUR DA FORM 2407 PROPERLY?
SURE, I DID IT LIKE I SHOULD, CONNIE.
GIVE THE PROPER DOPE ON THE UPPER PART OF THE FORM?
YES... TOLD 'EM WHO WE ARE, CLEARLY SHOWED WHAT EQUIPMENT, GAVE CORRECT NOMENCLATURE, FSN, AND FILLED IN ALL THE BLOCKS THAT APPLY.
MAINTENANCE REQUEST
(TM 38-750)
SECTION I
WORK REQUEST
MWO
EIR
CONTROL NUMBER
B 80225
1a. ORGANIZATION
HQ, 110th INF BDE
125th INF DIV
b. LOCATION
APO SAN FRANCISCO
c. ORG IDENT CODE
HH1000V
2. SERIAL NUMBER
20009939
3. NOUN NOMENCLATURE
TRUCK
4. LINE NUMBER
330030
5. MODEL
151
6. FEDERAL STOCK
2320-542-4
7. STRAC
8. UTILIZATION CODE*
ON
9. SELECTED ITEM
YES
NO
10. HOURS
N/A
11. MILES
7,390
12. ROUNDS
N/A
N/A
15. FIRST INDICATION OF TROUBLE (Select one-use ✓ or X)
INOPERATIVE
OVERHEATING
OUT OF ADJUSTMENT
NOISY
LOW PERFORMANCE
OTHER
HANDLING
TEST
STORAGE
FLIGHT
INSPECTION
OTHER
16. DESCRIBE DEFICIENCIES
ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM (Do not prescribe repairs)


HOW ABOUT THE BOTTOM OF THE FORM??
THAT WAS EASY... I EXPLAINED WHAT WAS WRONG... SENT IN PICTURES, MADE A SKETCH, TOLD 'EM WHAT SHOULD BE IMPROVED... THE WORKS!
DA FORM 1 JAN 64 2407
CONTROL COPY


HOW ABOUT THE 3 PRIORITIES FOR EIR'S?
EMERGENCY MEANS THE CONDITION OF THE EQUIPMENT IS UNSAFE AND WILL CAUSE SERIOUS TROUBLE—LIKE HURT OR KILL PEOPLE, DAMAGE EQUIPMENT OR NATIONAL SECURITY. SEND IT IN BY TWX OR PHONE.

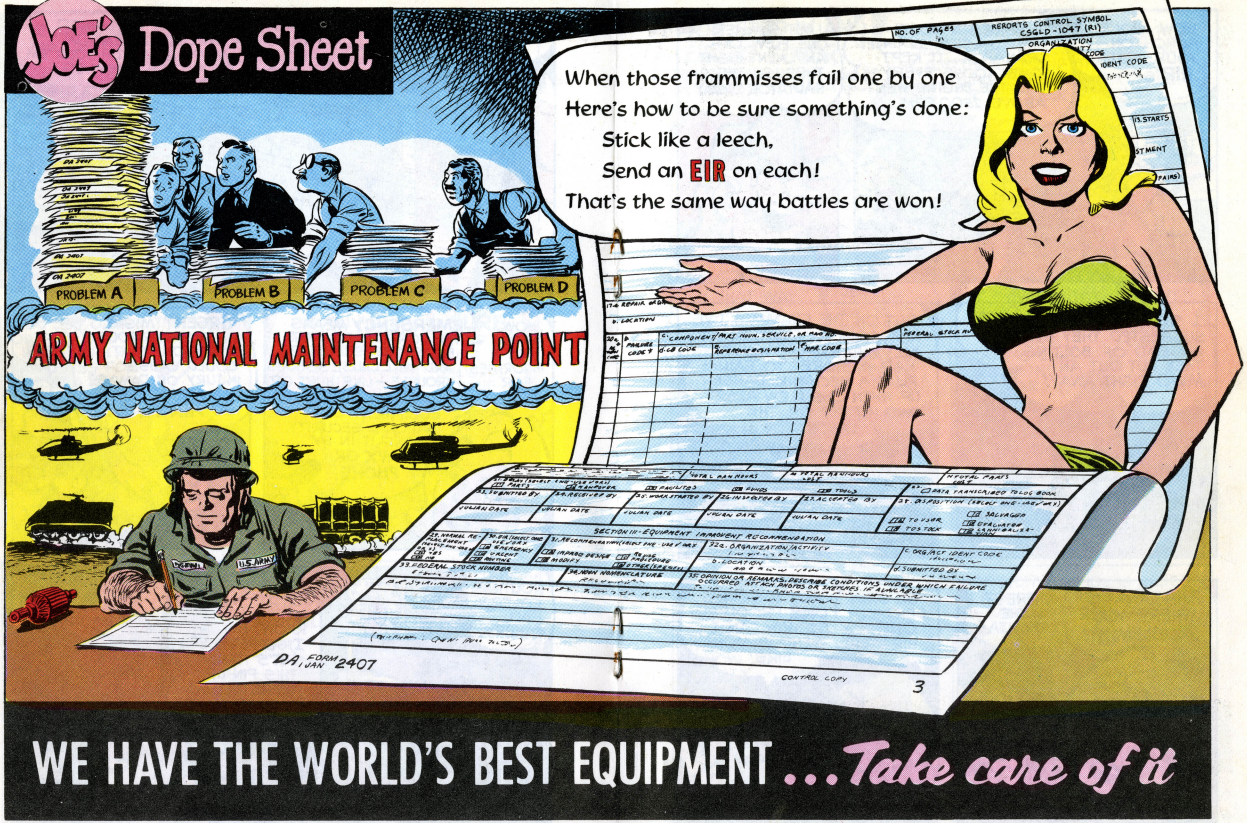
URGENT MIGHT BE A HAZARDOUS CONDITION THAT COULD CAUSE INJURY OR DAMAGE PROPERTY. THEY GO AIR MAIL.
HMM!


...AND ROUTINE COVERS ALL OTHERS.
THERE'S A LITTLE MORE YOU SHOULD KNOW. BEFORE I GO FURTHER, LET'S HANG THIS PIN-UP WHERE IT'LL DO SOME GOOD.

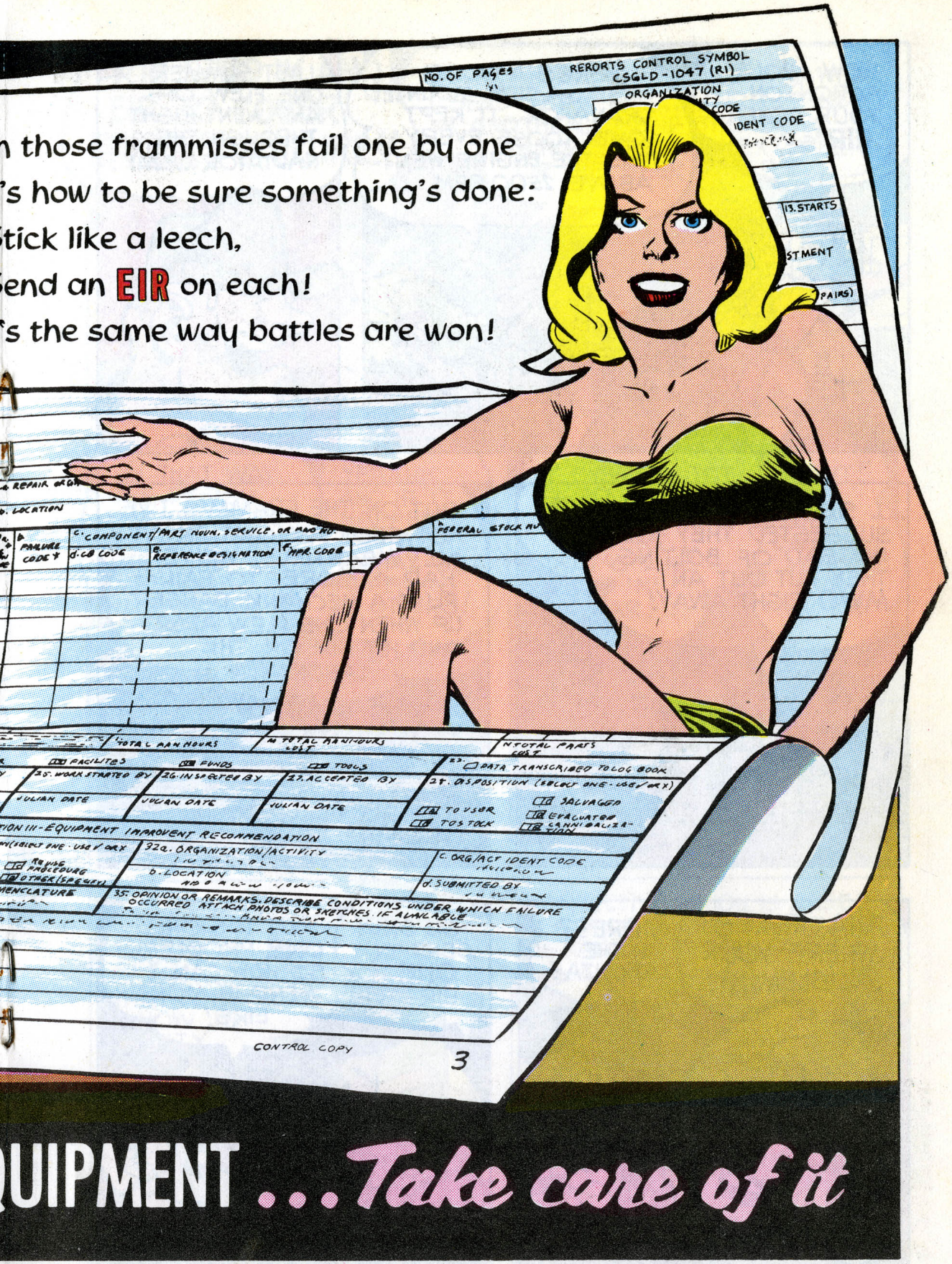


WE HAVE THE WORLD'S BEST EQ

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULL

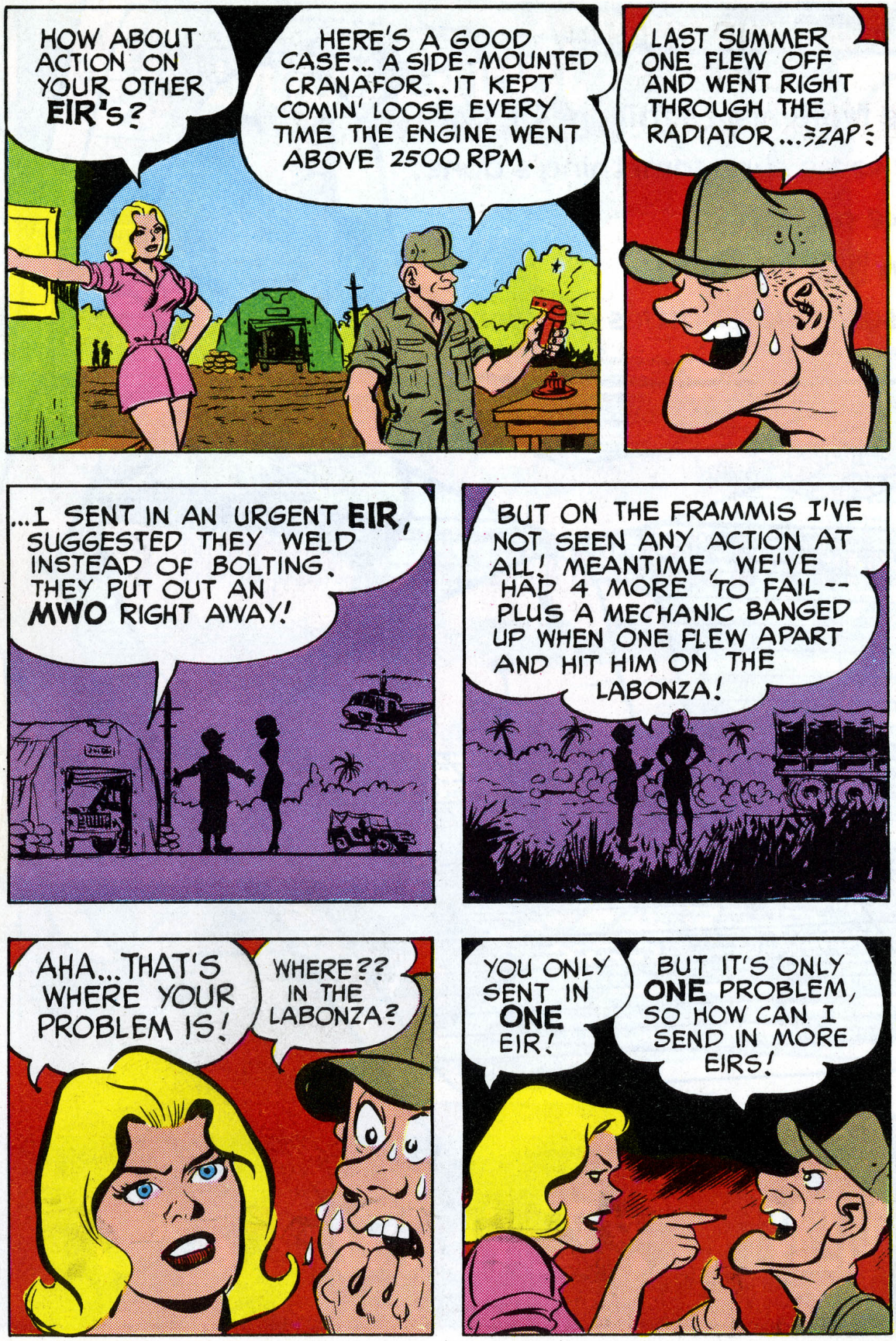


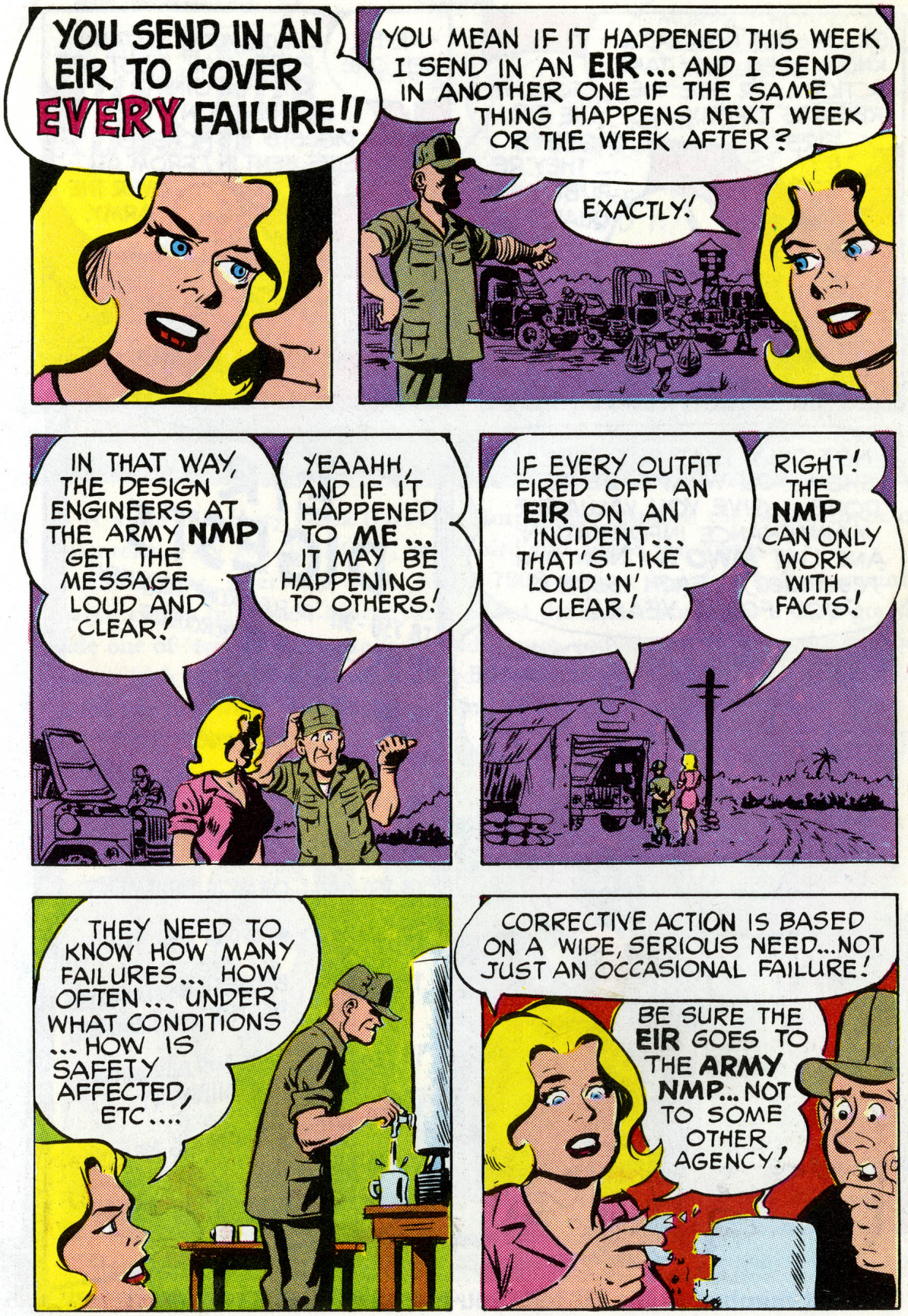
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

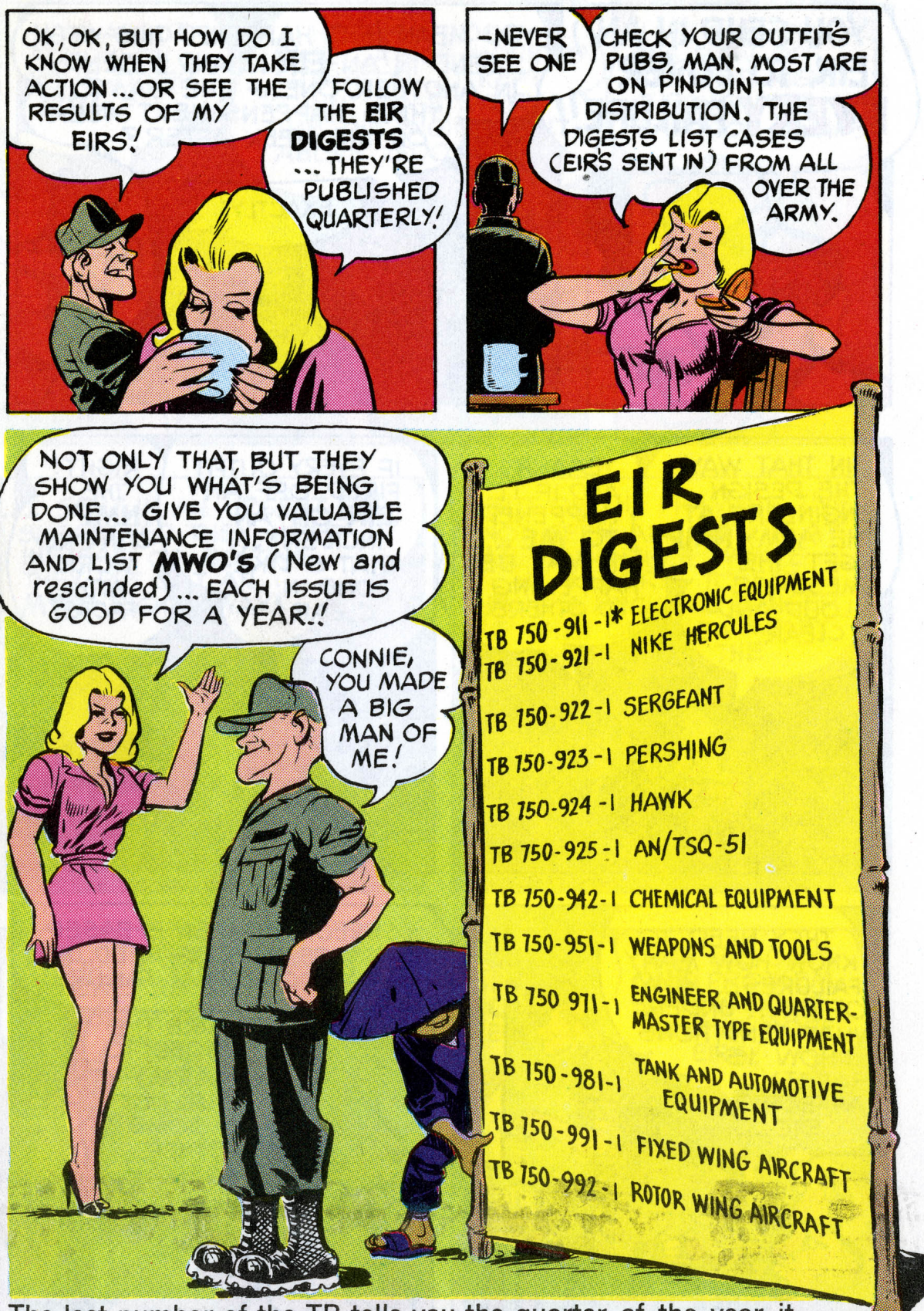


QUIPMENT ...*Take care of it*

LETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


HOW ABOUT ACTION ON YOUR OTHER EIR'S?
HERE'S A GOOD CASE... A SIDE-MOUNTED CRANAFOR... IT KEPT COMIN' LOOSE EVERY TIME THE ENGINE WENT ABOVE 2500 RPM.
LAST SUMMER ONE FLEW OFF AND WENT RIGHT THROUGH THE RADIATOR... ZAP!
...I SENT IN AN URGENT EIR, SUGGESTED THEY WELD INSTEAD OF BOLTING. THEY PUT OUT AN MWO RIGHT AWAY!
BUT ON THE FRAMMIS I'VE NOT SEEN ANY ACTION AT ALL! MEANTIME, WE'VE HAD 4 MORE TO FAIL-- PLUS A MECHANIC BANGED UP WHEN ONE FLEW APART AND HIT HIM ON THE LABONZA!
AHA... THAT'S WHERE YOUR PROBLEM IS!
WHERE?? IN THE LABONZA?
YOU ONLY SENT IN ONE EIR!
BUT IT'S ONLY ONE PROBLEM, SO HOW CAN I SEND IN MORE EIRS!

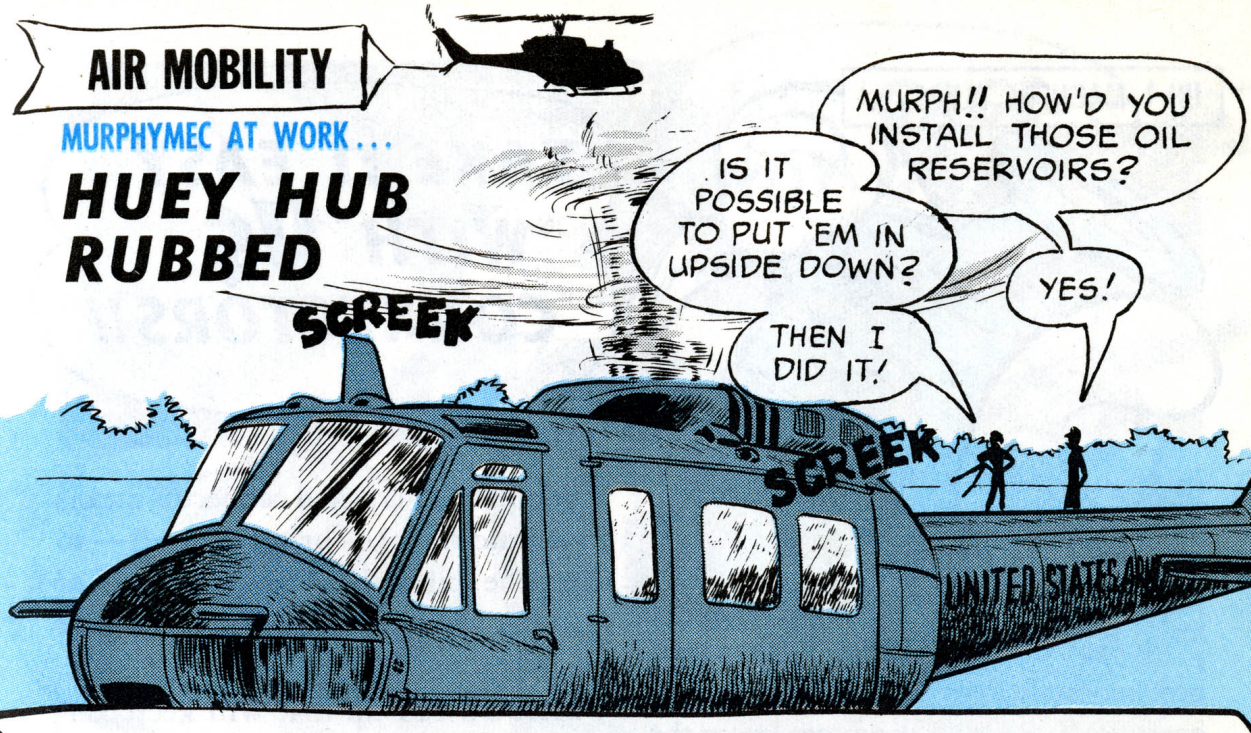

YOU SEND IN AN EIR TO COVER EVERY FAILURE!!
YOU MEAN IF IT HAPPENED THIS WEEK I SEND IN AN EIR... AND I SEND IN ANOTHER ONE IF THE SAME THING HAPPENS NEXT WEEK OR THE WEEK AFTER?
EXACTLY!
IN THAT WAY, THE DESIGN ENGINEERS AT THE ARMY NMP GET THE MESSAGE LOUD AND CLEAR!
YEAAHH, AND IF IT HAPPENED TO ME... IT MAY BE HAPPENING TO OTHERS!
IF EVERY OUTFIT FIRED OFF AN EIR ON AN INCIDENT... THAT'S LIKE LOUD 'N' CLEAR!
RIGHT! THE NMP CAN ONLY WORK WITH FACTS!
THEY NEED TO KNOW HOW MANY FAILURES... HOW OFTEN... UNDER WHAT CONDITIONS ... HOW IS SAFETY AFFECTED, ETC....
CORRECTIVE ACTION IS BASED ON A WIDE, SERIOUS NEED...NOT JUST AN OCCASIONAL FAILURE!
BE SURE THE EIR GOES TO THE ARMY NMP... NOT TO SOME OTHER AGENCY!



* The last number of the TB tells you the quarter of the year it was published – 1, -2, -3 or -4.

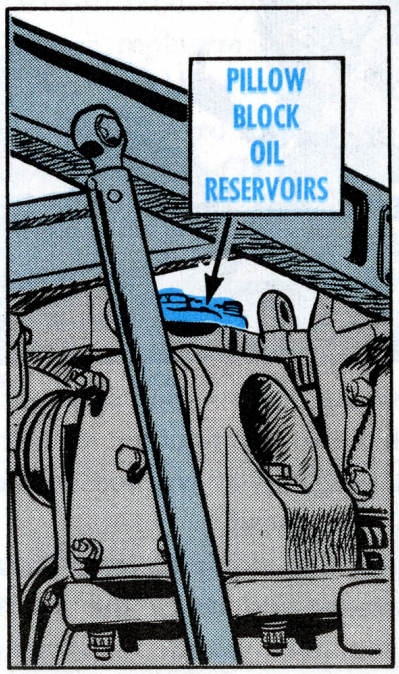
MURPHYMEC AT WORK...

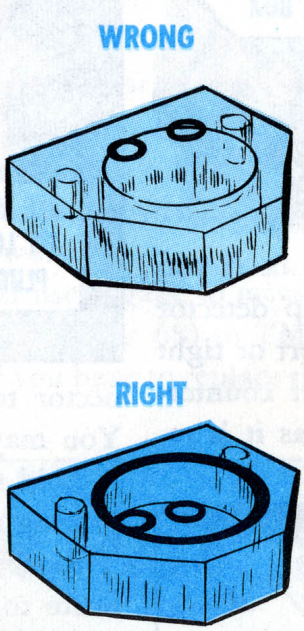
HUEY HUB RUBBED

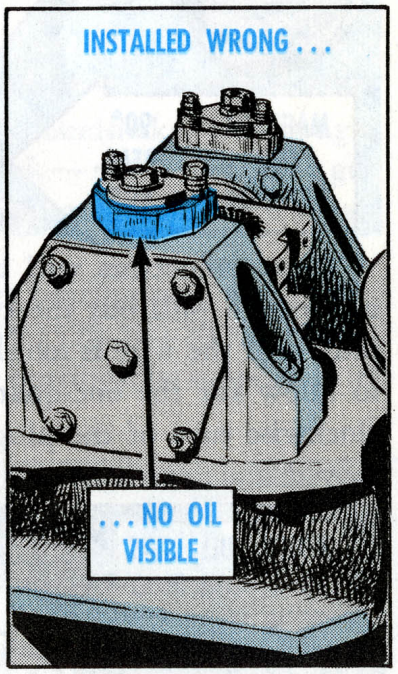


It seems this Huey Delta (UH-ID) Murphymec installed the pillow block oil reservoirs, P/N 204-010-191-1, on his bird and added the covers.

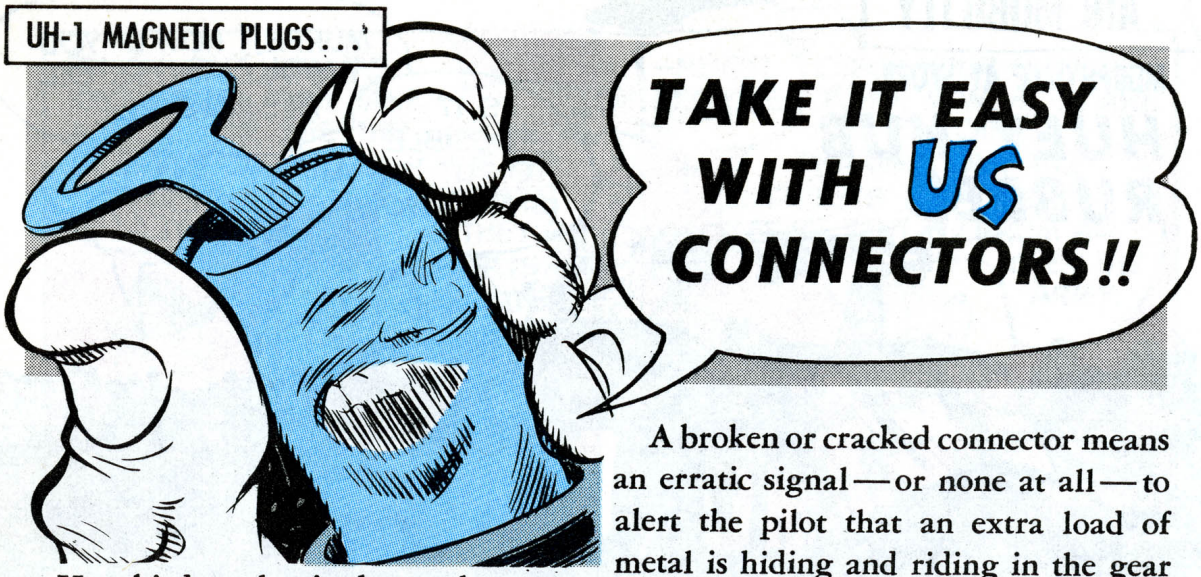
Filling the reservoirs with Mil-L-7808 oil is a bonafide built-in maintenance check, but when Murphymec added the amber stuff, not a drop got inside one of 'em! It was installed upside down, and Murph didn't notice his boo-boo, which could have caused the bird to come unglued while airborne, or deadlined her just when she was needed for a Hueyvac mission.



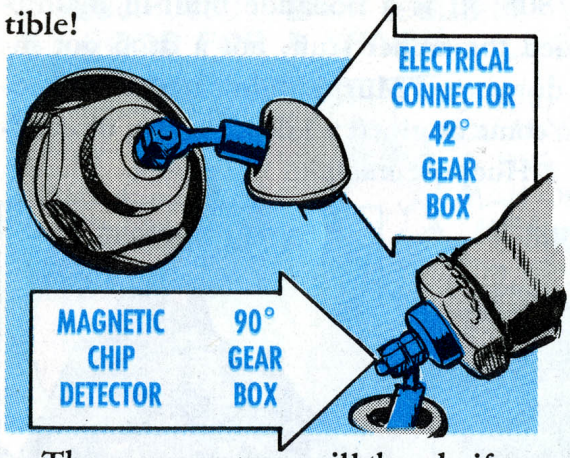




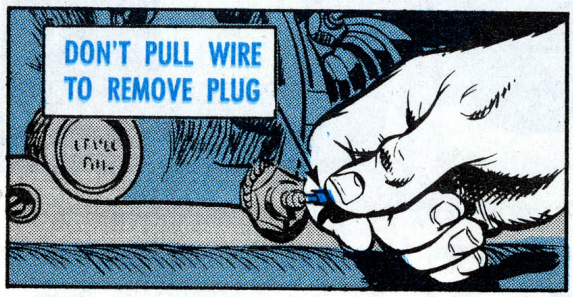
Many aircraft parts are immune to Murphy's Law. And you have checks and by-the-book maintenance to help stamp out this pest. Use 'em.



Hueybird mechanics know that gear box magnetic insert plugs get eyeballed every PMI, PE. Ole Pro types know the intermediate and tail rotor gear box electrical connectors are not indestructible!



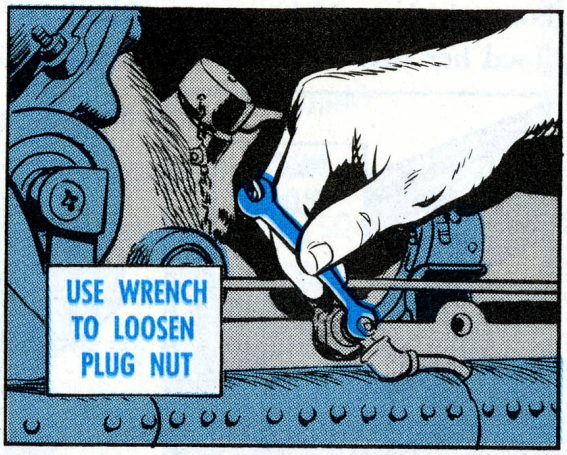
These connectors will break if you use 'em to pull out the chip detector plug or if the wire is too short or tight to allow for the one-quarter counterclockwise turn of the plug as it is removed.



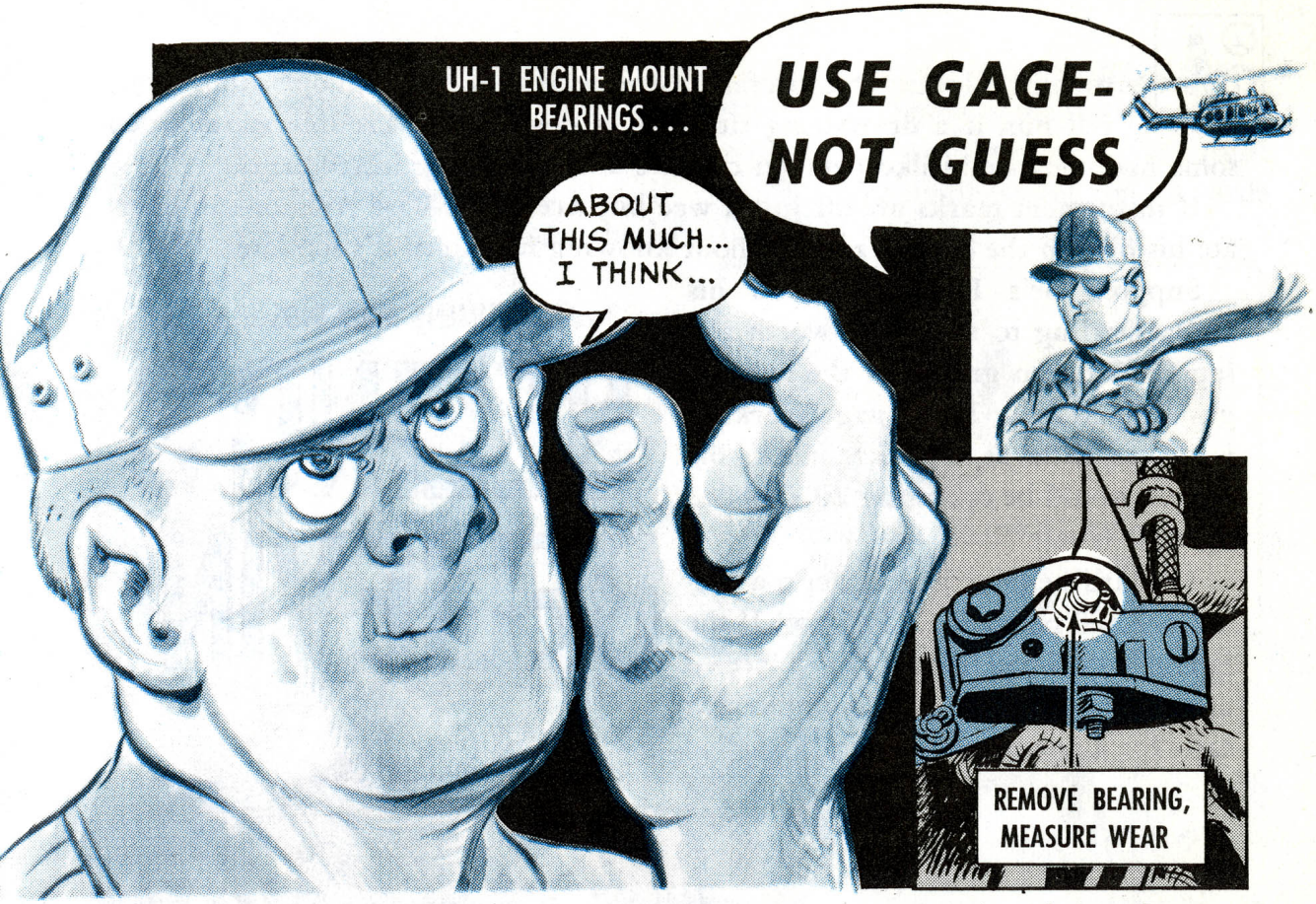
A broken or cracked connector means an erratic signal—or none at all—to alert the pilot that an extra load of metal is hiding and riding in the gear oil.

Here's a PM tip that will keep connectors in one piece.

If the electrical wire is too short use a small open end fixed wrench to loosen the lock nut that holds the connector on the plug. This will allow the connector to swing loose—but stay put. You may have to use another wrench to hold the plug nut as you loosen the locking nut. No sweat.



Remember, you don't have to be a brute to remove and check the insert plugs, and that heavy-handed treatment of the electrical connectors can downtime that Huey f-a-s-t! So, take it easy, huh?



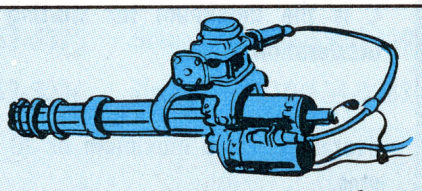
That's right, chopper caretakers. TM 55-1520-210-20PMP (26 Apr 68) says engine mount bearings get replaced if allowable play limits — 0.006-in radial, 0.012-in axial — are exceeded.

Same replacement poop applies to all Hueys.

That excessive bearing play can be just a teenie-weenie bit — like maybe 0.001 inch — and hard to measure with tripod engine mount handshake. It's enough, tho, to cause the hydraulic lines to break, loosen, or leak — not to mention a gut rattling ride. And a birdman without hydraulic power boost is in for a maxi-size case of puckeritis. Maybe worse!

So sharpen your peepers and use a gage to measure bearing play when pulling the 100-hr inspection. Ch 6 (22 Apr 68) to TM 55-1520-210-20 has the inspection poop . . . para 5-31. If you have to replace the bearings, let support do it!

MINNIE IS AN M134



If your older aircraft armament subsystem pubs haven't caught up yet, don't let it throw you. The 7.62-MM High Rate 6-barrel Minnie — the GAU-2B/A — has now been classified as the M134 machine gun.

An Armybird pilot uses his aircraft instruments to stay within operating limits—or to tell him if a drawstring situation is developing. Trouble starts when some maintenance birdkeepers get careless about marking instruments.

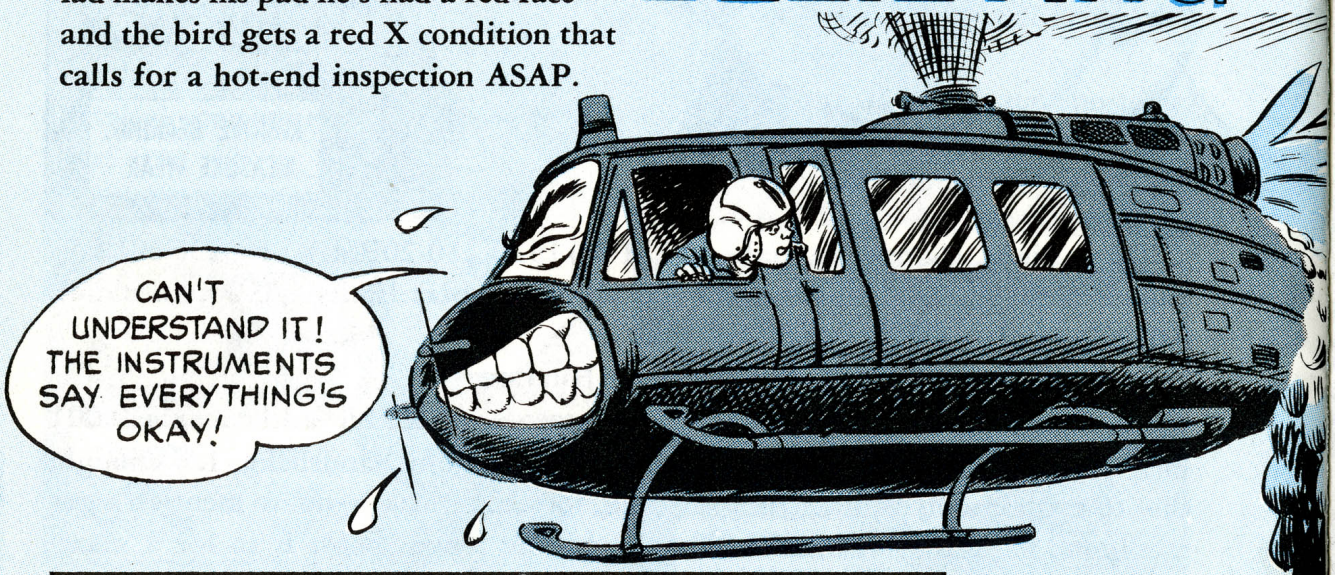
If instrument marks are off just a wee bit, Ace-of-the-Base Aviator can operate his bird in the danger zone without knowing it—until it's too late.

Suppose he's Hueybirding in his Delta Darling to make life worth living for a dozen grunts. If the exhaust gas temperature (EGT) gage marking is off as little as one tick mark, his engine would be operating 20°C above the 640°C safe limit.

His bird's engine gets hotter'n a firecracker and perhaps . . . kerpow! If the lad makes his pad he's had a red face—and the bird gets a red X condition that calls for a hot-end inspection ASAP.

INSTRUMENT MARKINGS . . .

SEEING'S BELIEVING

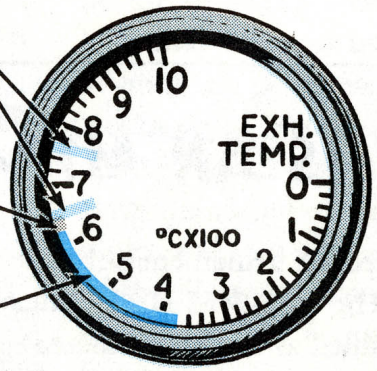


Pilots—for a healthy engine that won't let you down keep the exhaust temp on your UH-1D within the limits marked off on the dial.

RED . . 640-degrees C. 760-degrees C is the maximum for starting and acceleration.

YELLOW . . . 620-degrees C to 640-degrees C, for a maximum of 30 minutes.

GREEN . . . 390-degrees C to 620-degrees C, for continuous operation.



INSTRUMENT MARKINGS . . .

SEEING'S BELIEVING

An Armybird pilot uses his aircraft instruments to stay within operating limits —or to tell him if a drawstring situation is developing. Trouble starts when some maintenance birdkeepers get careless about marking instruments.

If instrument marks are off just a wee bit, Ace-of-the-Base Aviator can operate his bird in the danger zone without knowing it—until it's too late.

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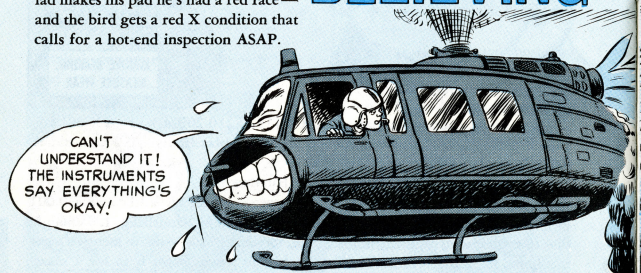

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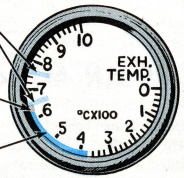
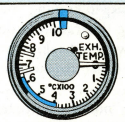


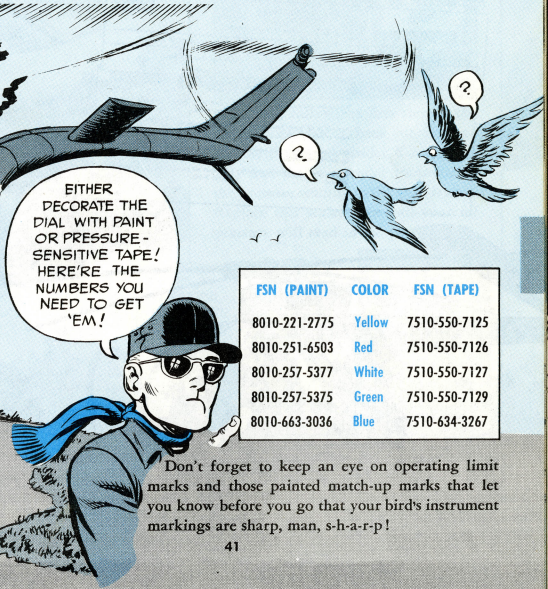
All birds—smooth-flow turbos or sweet trip recips—vibrate something fierce-like. Glass instrument covers come unglued and skitter around a bit. An ol' pro crewchief or mechanic checks 'em daily to see if they're OK. If they're not, he follows the guidelines in Chap 7 of the -10 Operator's Manual for the correct instrument markings—no messing with guessing—and then eyeballs the stick 'em-on poop in TM 55-6600-200-20 (July 63).

First choice is to paint on the markings with lacquer, Fed Specs TT-L-32; alternate method is to use pressure sensitive tape. These paint stock numbers will get you a quart of the bright stuff, and the tape numbers get you 72 yards of 1/2-in wide sticky stuff.



A TICK MARK'S IMPORTANT . . .

BE SURE THE RANGES ARE MARKED RIGHT . . . AND THE MATCH-UP MARKS ARE ALINED



FSN (PAINT)	COLOR	FSN (TAPE)
8010-221-2775	Yellow	7510-550-7125
8010-251-6503	Red	7510-550-7126
8010-257-5377	White	7510-550-7127
8010-257-5375	Green	7510-550-7129
8010-663-3036	Blue	7510-634-3267

Don't forget to keep an eye on operating limit marks and those painted match-up marks that let you know before you go that your bird's instrument markings are sharp, man, s-h-a-r-p!

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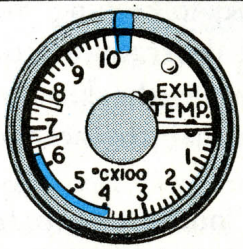

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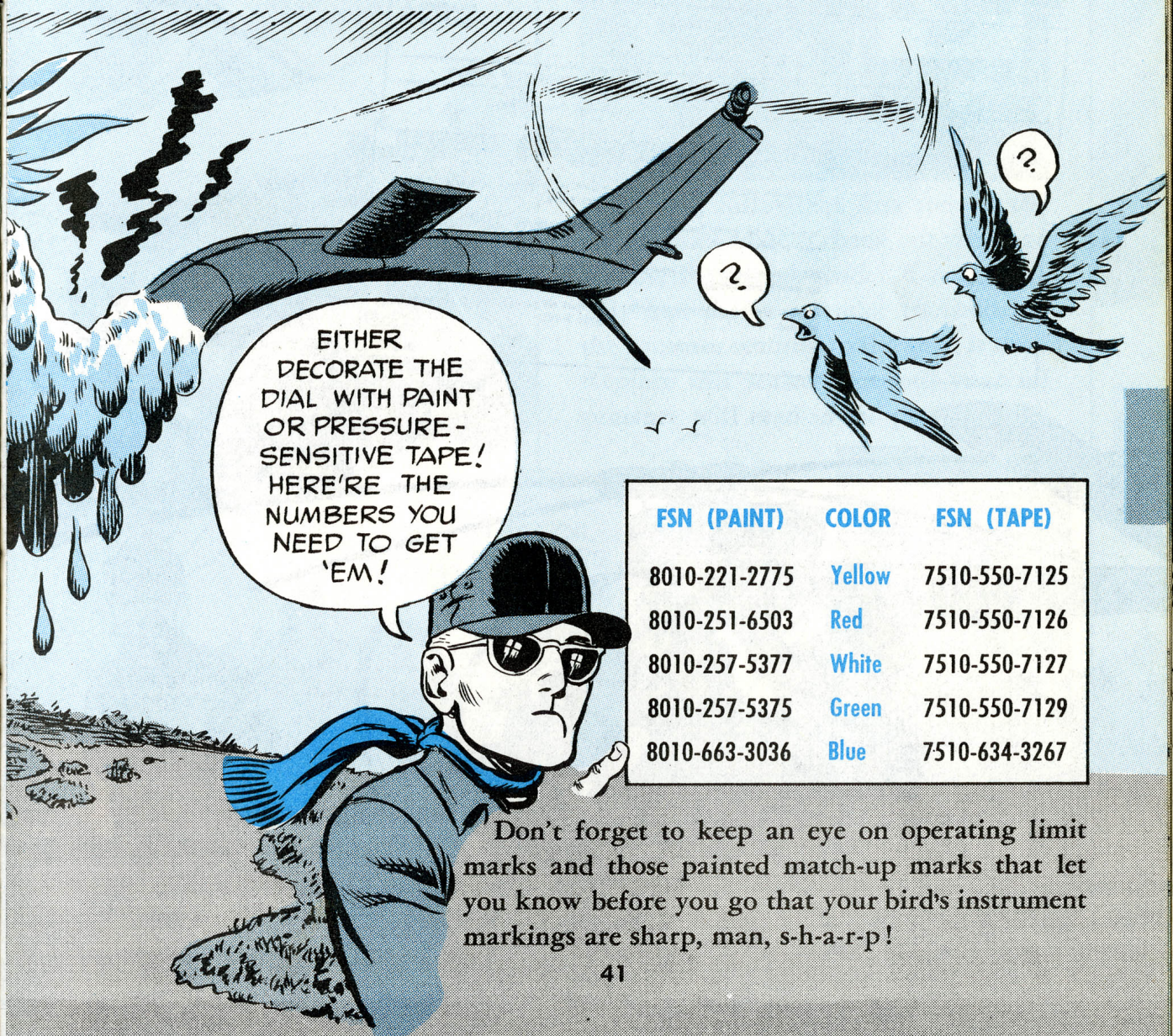

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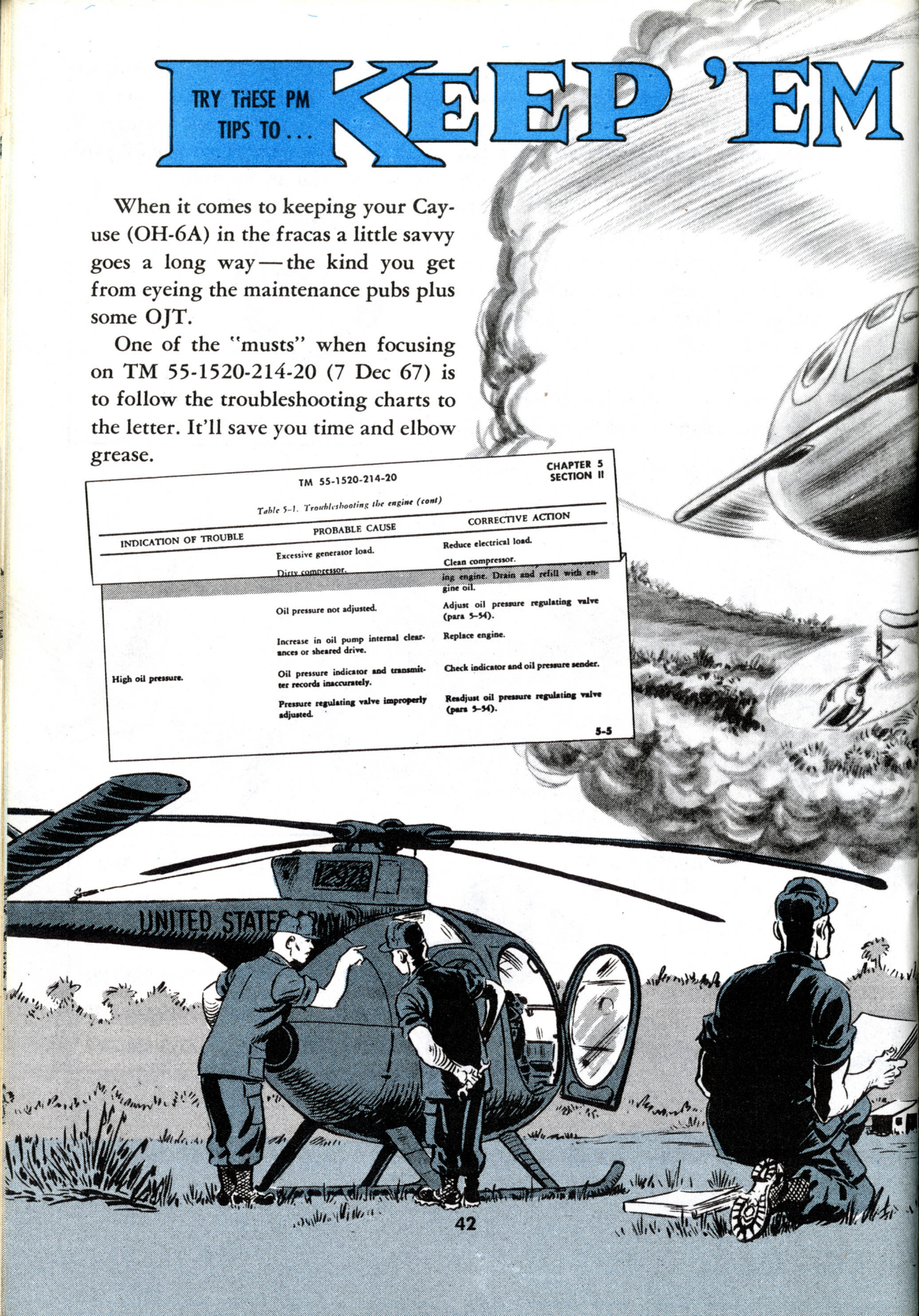
TRY THESE PM TIPS TO . . . KEEP 'EM

When it comes to keeping your Cayuse (OH-6A) in the fracas a little savvy goes a long way — the kind you get from eyeing the maintenance pubs plus some OJT.

One of the "musts" when focusing on TM 55-1520-214-20 (7 Dec 67) is to follow the troubleshooting charts to the letter. It'll save you time and elbow grease.

Table 5-1. Troubleshooting the engine (cont)

INDICATION OF TROUBLE	PROBABLE CAUSE	CORRECTIVE ACTION
	Excessive generator load.	Reduce electrical load.
	Dirty compressor.	Clean compressor.
		ing engine. Drain and refill with engine oil.
	Oil pressure not adjusted.	Adjust oil pressure regulating valve (para 5-54).
	Increase in oil pump internal clearances or sheared drive.	Replace engine.
High oil pressure.	Oil pressure indicator and transmitter records inaccurately.	Check indicator and oil pressure sender.
	Pressure regulating valve improperly adjusted.	Readjust oil pressure regulating valve (para 5-54).



TRY THESE PM TIPS TO...

KEEP 'EM FLYING

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TM 55-1520-214-20 CHAPTER 5 SECTION II

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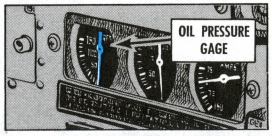
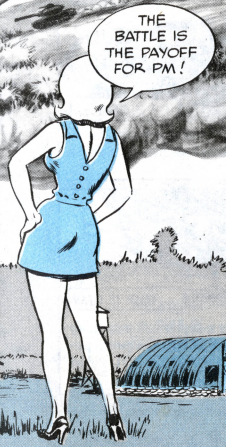
5-5

HIGH OIL PRESSURE??

Say, for example, you get a high engine oil pressure reading. Don't lower the pressure by adjusting the regulator valve—this will give you low torquemeter readings. Chances are the valve is backed off 5-1/2 turns which is the right setting.



Instead, follow the first step in the chart which says to check out the gage and the oil pressure sender. You'll probably find that the sender transmitting the pressure reading to the gage is shot. Replace this sealed unit and your oil pressure will read in the green.



FLYING

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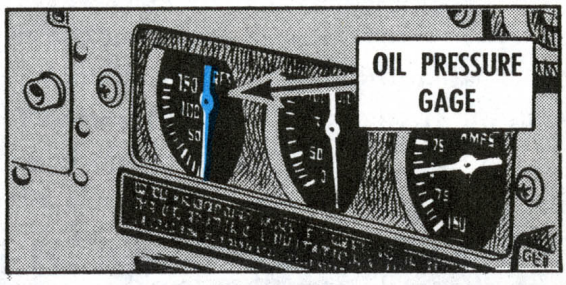

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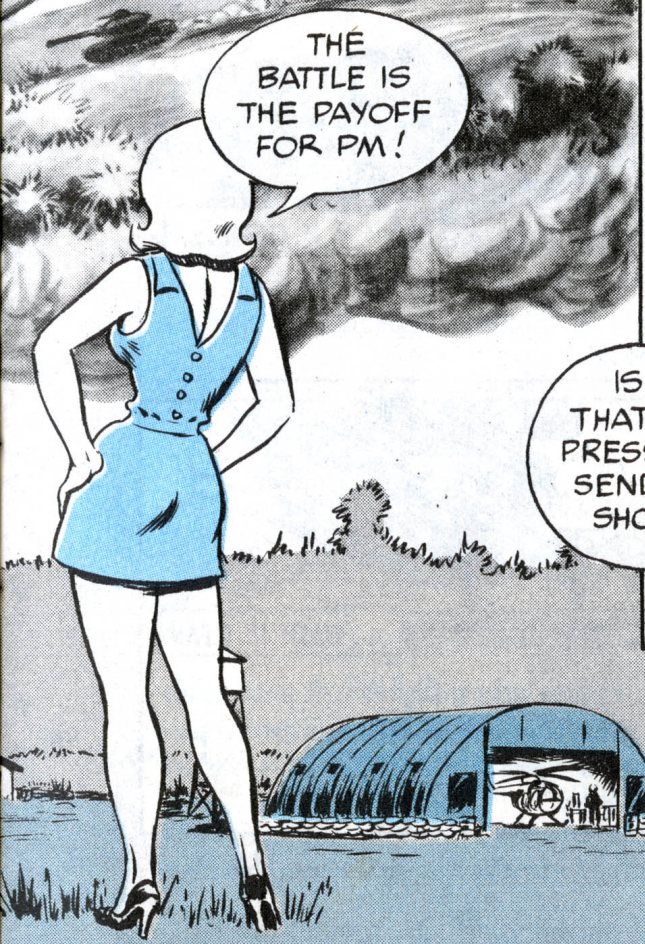
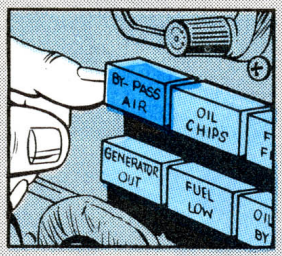


P.S. MORE

KEEP FILTER CLEAN

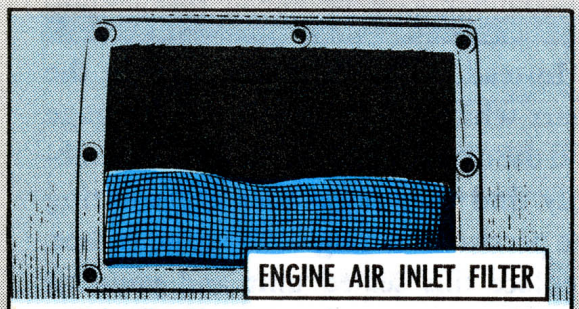
When the sun turns your operating area into a dust bowl you really get a chance to use your savvy.



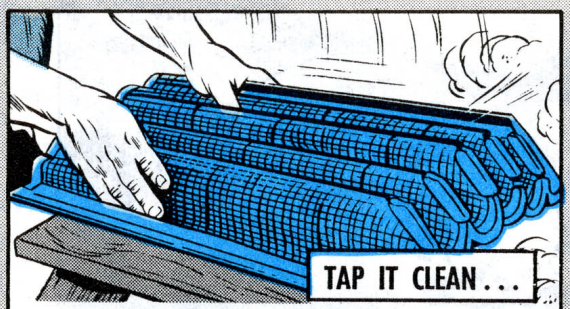
Take the engine air inlet filter. Sure, you have a differential pressure switch which sets off the by-pass air light—meaning the filter is clogged and the pilot has to pull the filter by pass door actuating cable release.

'Course, once the filter is cut out the engine will suck in the dirt like a vacuum cleaner when the bird comes in to roost. Under real dusty conditions you've got an engine change on your hands due to foreign object damage (FOD), sure 'nuff.

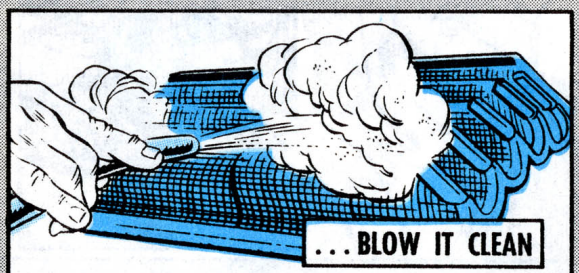
What to do? Clean that filter daily before it gets so clogged with dirt that it has to be by-passed. Here's how:



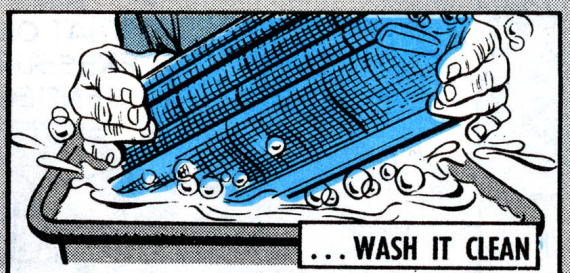
Take the filter out and invert it on a flat or inclined surface to avoid damaging the corners.



Make with an up and down beating motion until the dirt shakes loose from the pleats in the filter.



If you have compressed air handy, blast the filter until no more dirt is present. Be sure you don't hold the hose nozzle against the filter; the filter material can be damaged.

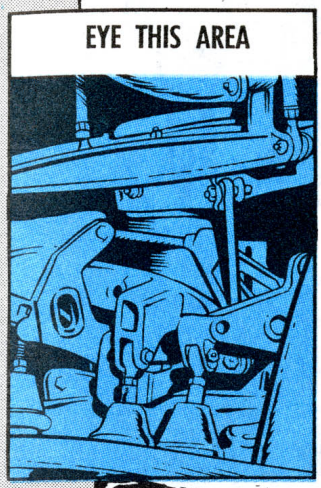


If you're lucky enough to have water handy you can also wash the filter with general purpose detergent, FSN 7930-282-9701, and let it air dry.

After cleaning, eye the filter for holes or breaks in the outer screen. No damage? You've got it made in the shade!

LOOK FOR CORROSION

When the rain comes down in buckets be sure you give little speedy a good going over for corrosion. Internal magnesium parts aren't affected too much but those external parts . . . they start to corrode real fast from scratches caused by lock wire and tools.

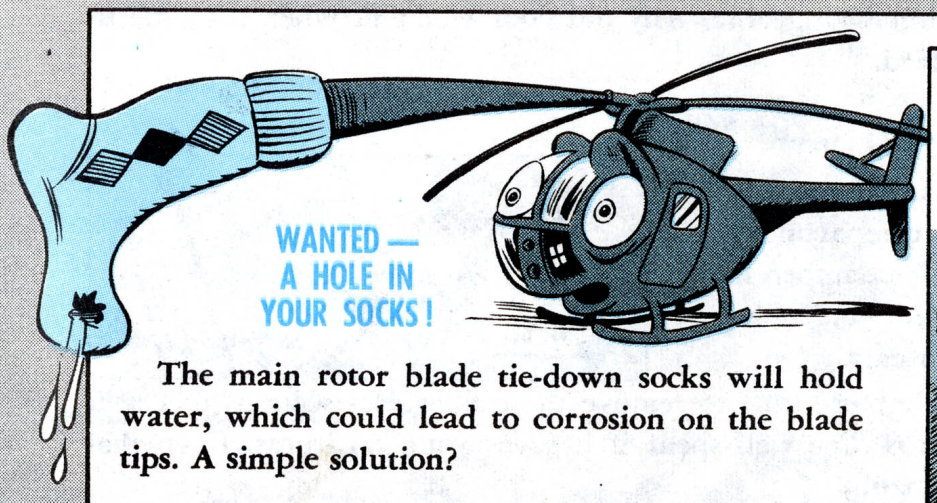


Focus especially on the tail rotor bellcrank and bracket. Other parts that need the eagle eye include the collective mixer bellcrank and swashplate. You'll find all the poop you need to rid your bird of corrosion in Chap 2, Sect II of TM 55-405-3 (12 Jul 66). A good way to keep corrosion from getting a toehold is to keep dirt and grease from building up on the exterior of your bird.

Try to wash your bird every week with clean, cold water and mild soap.

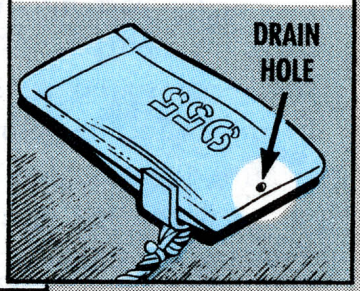
Removing grease will mean using dry-cleaning solvent, P-D-680 Type II, before your wash job. Just be sure none of the solvent gets on plastic surfaces, electrical connections and wiring . . . damages 'em for real!

During the rainy season try to keep your bird under cover. If you can't, a tarp or canvas tied down over the rotor head goes a long way toward keeping parts dry.



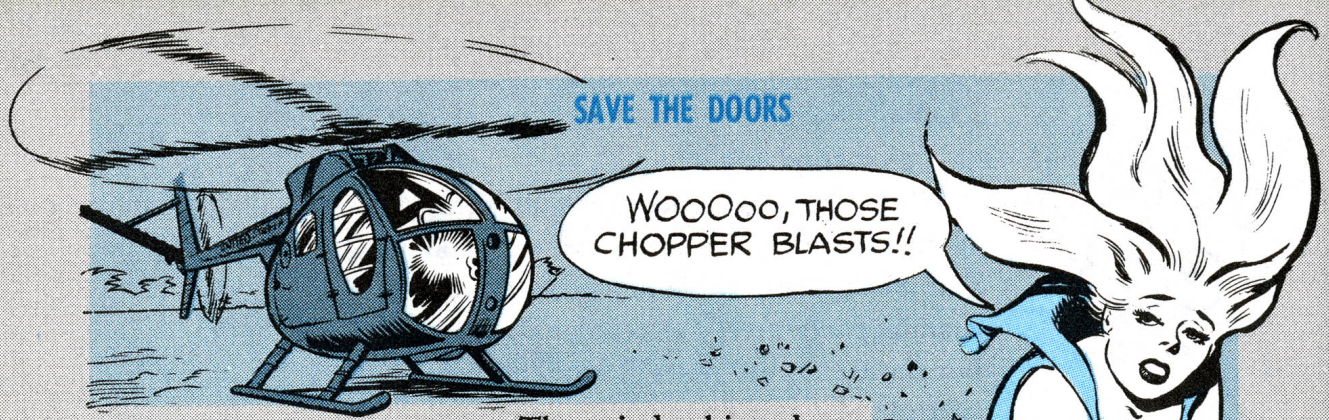
The main rotor blade tie-down socks will hold water, which could lead to corrosion on the blade tips. A simple solution?

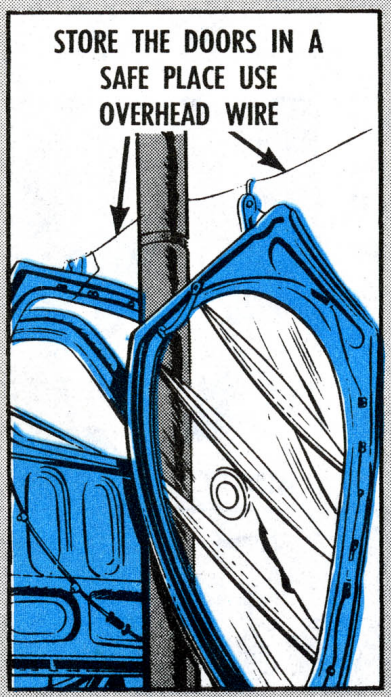
Make a 0.25-in drain hole on the bottom of each sock, centered 0.38 inch from the outboard end.



PS MORE

SAVE THE DOORS





The wind whipped up by other choppers can have quite an effect on your lightweight bird.

Like—if the doors are not latched in the closed position following a mission the wind from a hovering Huey or Chinook can yank them right off the hinges!

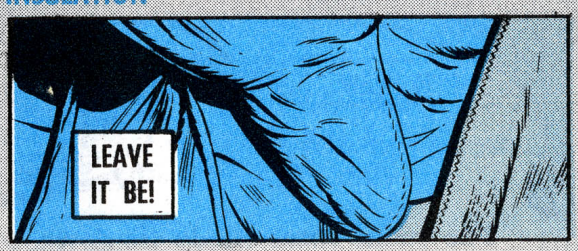
The wind blast from a larger chopper hovering close to a shut-down Cayuse can also damage the main rotor blades—'nuff said?

A point or two when you fly a doors-off configuration.

Try to find a place to store your doors where they won't get trampled or handled by moving from place to place . . . a lot of doors get damaged in storage.

When you do store crew and cargo compartment doors, be sure you plainly mark the tail number of the bird they came from, on the inside. Doors are replaceable but not interchangeable. Any old door won't fit when it's time to put it back on your bird.

KEEP YOUR INSULATION



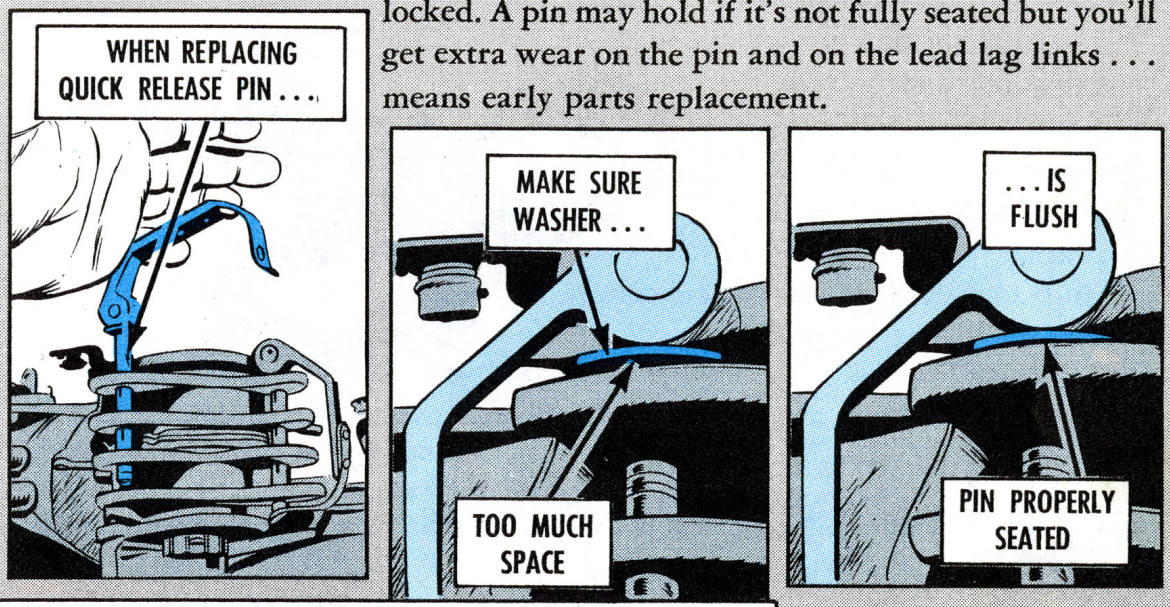
The insulation blankets across the rear of the passenger compartment are there for a purpose—to dampen high-frequency sound so it won't have a harmful effect on your ears.

Sure, it takes a little more time to remove those fiberglass sections to get at access doors. But this is time well spent if it saves your eardrums. Keep that insulation installed, man!

The main transmission insulation is bonded to the cover and comes off as an assembly. The same insulation bonding set-up is used at the upper aft sections of the passenger compartment . . . no problem with it staying put.

QUICK RELEASE PINS TIGHT?

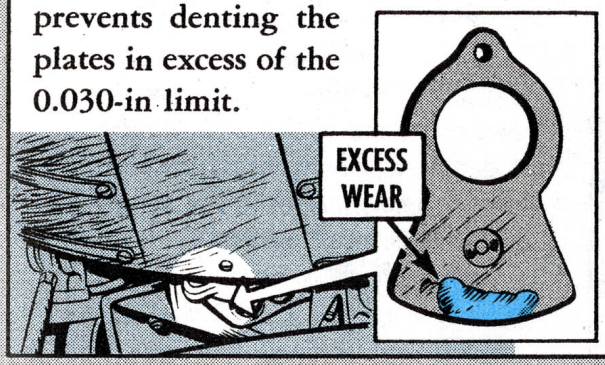
Changing main rotor blades on your Cayuse is a breeze with the quick-release pins. Just be sure the pins are seated with the washer flush and the bottom pin locked. A pin may hold if it's not fully seated but you'll get extra wear on the pin and on the lead lag links . . . means early parts replacement.



CENTER CYCLIC

You're also in for some sooner-than-expected part changes unless pilots center the cyclic prior to engine start and shut-down. Neutral cyclic is 30 percent from full aft and vertical.

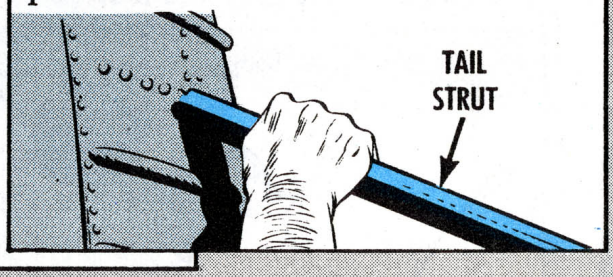
The idea is to have the swashplate level so the rollers meet the droop stop striker plates at the same time. This prevents denting the plates in excess of the 0.030-in limit.



NO TWIST, PLEASE

When eyeing your bird go easy on the muscle power in places that require a physical check.

Take the horizontal tail strut. Check for tightness with a fore and aft movement but don't twist the strut or you'll loosen it for real . . . another part replacement!!



Yessir-e-e-e, little speedy needs tender lovin' care to stay in the pink—the kind that only **your** savvy can provide.

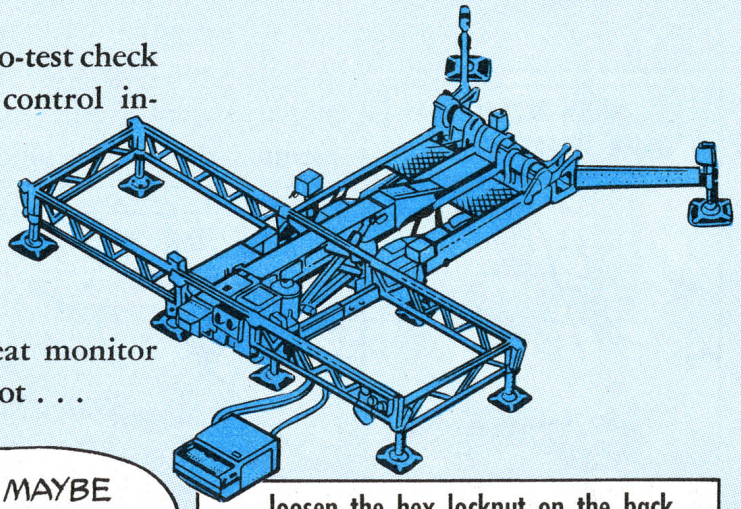
PS END

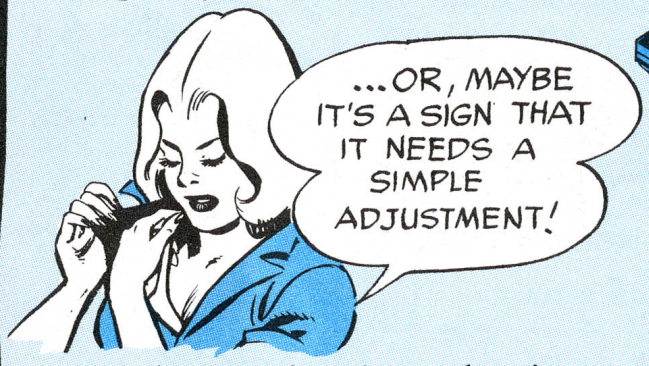
NIKE NOTES

A PRESSING PROBLEM

OK . . . you make a press-to-test check on a launcher and section control indicator for one of your Nike-Hercules launchers to see whether the heater for the missile batteries is working.

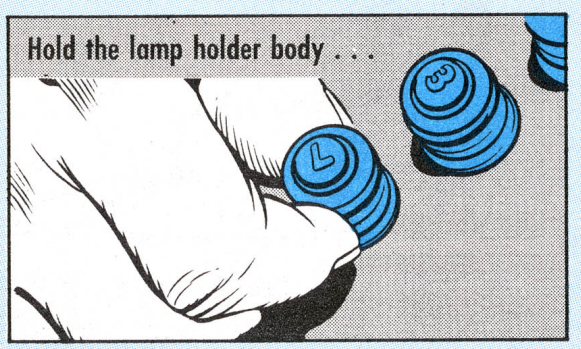
But no light from the heat monitor lamp. Maybe the lamp is shot . . .



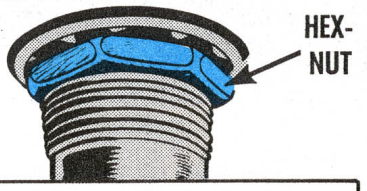


If the lamp is going to be given a chance to light, you need room between the lamp holder body and the lens assembly. You don't want the lens to bottom against the lamp holder panel nut before the lamp has a chance to go on.

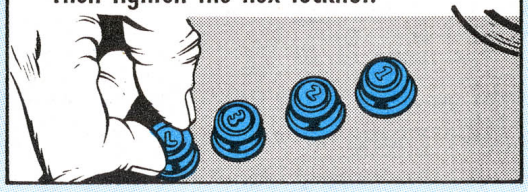
You make sure you have the needed space with a little give and take.



. . . loosen the hex locknut on the back of the panel . . .



. . . and then adjust the front mounting nut a bit at a time until the light comes on as you make the press-to-test check. Then tighten the hex locknut.



Now . . . make sure the DC power switch is OFF. Next, run a jumper wire between the JIG-13 and J72D-40 receptacles, the idea being to simulate below normal battery temperature so that the lamp will go on automatically.

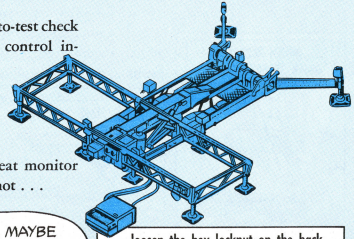
Turn on the DC power. Does the heat monitor lamp light? If not, make a stab at adjusting the front mounting nut again. Still no dice? It's time for a new heat monitor lamp.

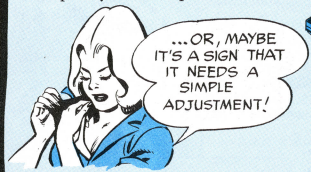
NIKE NOTES

A PRESSING PROBLEM

OK . . . you make a press-to-test check on a launcher and section control indicator for one of your Nike-Hercules launchers to see whether the heater for the missile batteries is working.

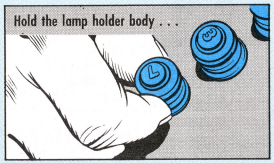
But no light from the heat monitor lamp. Maybe the lamp is shot . . .





If the lamp is going to be given a chance to light, you need room between the lamp holder body and the lens assembly. You don't want the lens to bottom against the lamp holder panel nut before the lamp has a chance to go on.

You make sure you have the needed space with a little give and take.



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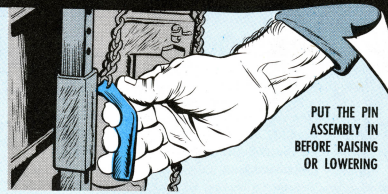
LAUNCHER

ON THE LEVEL, JACK



Are you looking to keep your Nike-Hercules launcher in good shape? Then take a good look at pages 5-16, of Chap 5-19 in TM 9-1440-250-12/2.

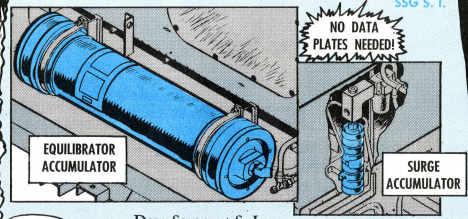
You'll see a couple of cautions — one that tells you to put in the pin assembly whenever a jack is lowered or raised so that the jack won't collapse under load when the hydraulic pressure is released . . . and the other that says when the jacks are under load, you should extend or retract them at the same time to keep the launcher base from getting warped.

NO NEED TO HEED

Dear Half-Mast,

One of our Nike-Hercules launchers does not have a data and warning plate on the equilibrator accumulator. I say the plate's not needed. Right or wrong?

SSG S. I.



Dear Sergeant S. I.,

You're right. The same goes for the surge accumulator in the hydraulic power unit. The plate's not needed there, either, so no need to order 'em.

Half-Mast

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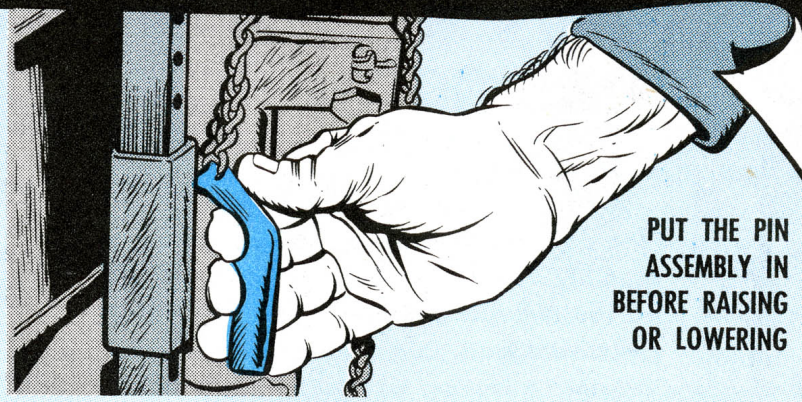

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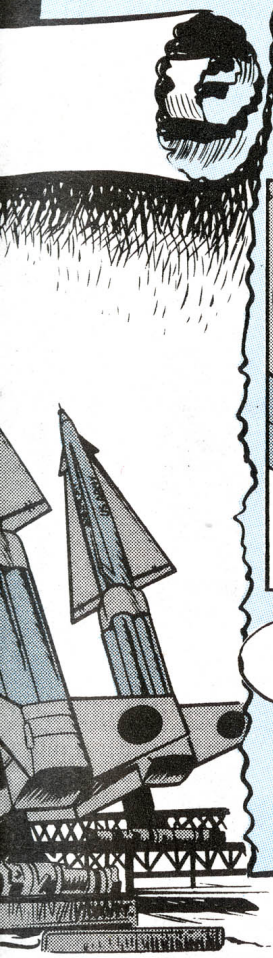

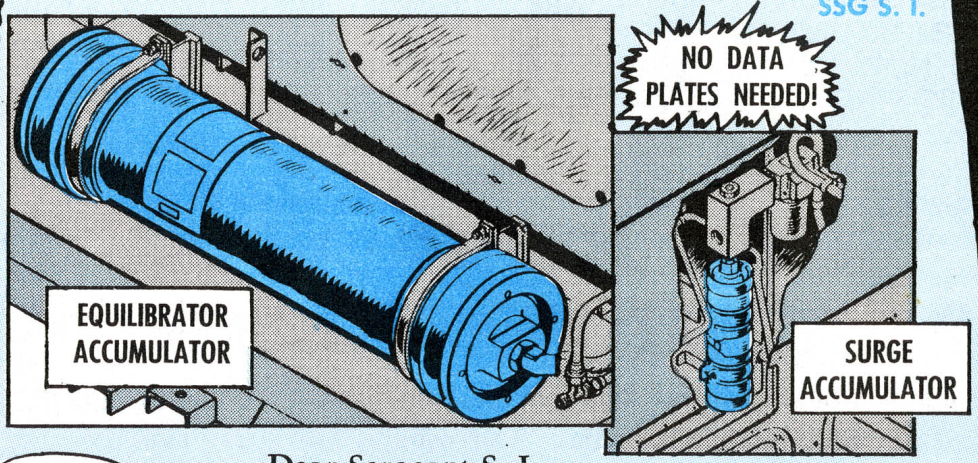

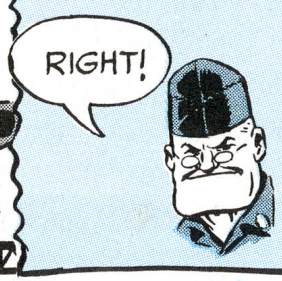

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Half-Mast

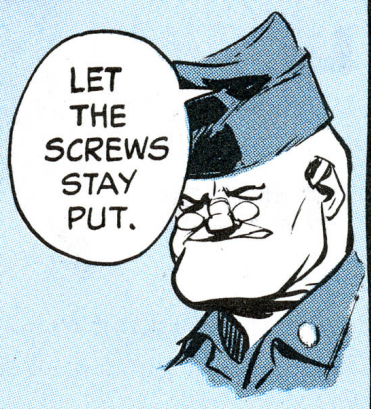
LAUNCHER

CHANGE OF HEART

Dear Half-Mast,

A note on page 9 of LO 9-1400-250-20 (Jan 65) said to remove the four setscrews monthly from the lower strut assembly on the Nike-Hercules launcher and squirt penetrating oil on the trunnion pins. But the note's missing from Ch 2 (Aug 67) to the LO. A mistake?

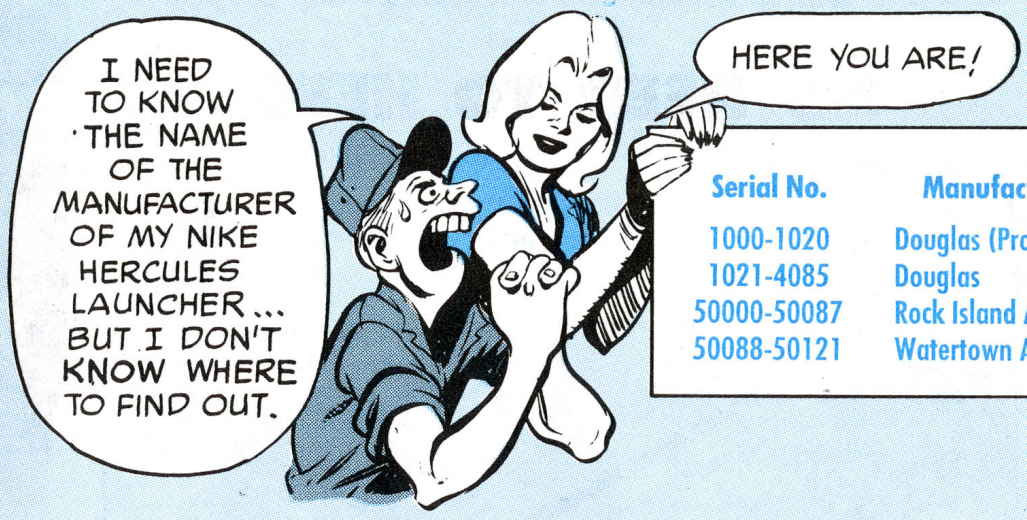
SSG N. L.



Dear Sergeant N. L.,

No. The people in the know decided there'd be less damage to things if the screws stayed put. *Half-Mast*

BY THE NUMBERS



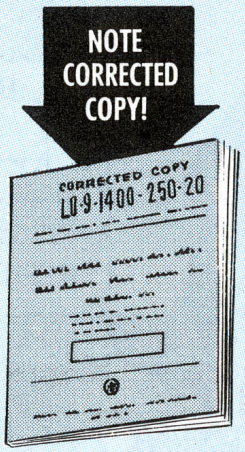
Serial No.	Manufacturer
1000-1020	Douglas (Proto-Type)
1021-4085	Douglas
50000-50087	Rock Island Arsenal
50088-50121	Watertown Arsenal

DOES JOB TO A "T"

Do you have the latest copy of LO 9-1400-250-20 for using around your Nike-Hercules launcher?

No . . . not the reprint that includes Ch 1 and is dated Jan 65. But the one that also has "Corrected Copy" stamped across the top of the front cover.

If you're using the plain reprint copy, page 18 tells you to use GAA grease on the inverted T on the launching-handling rail. But the corrected copy says to put CT—corrosion preventive compound—on the inverted T. And CT is right—not GAA.

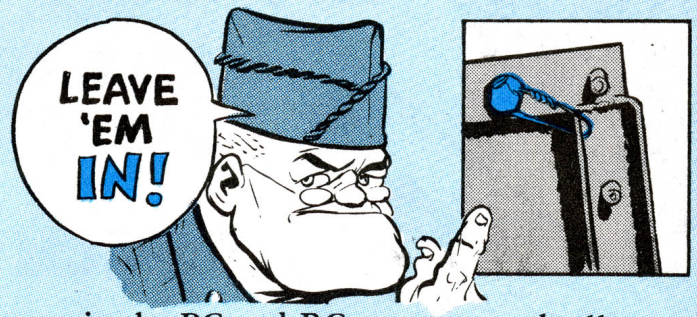


BETTER PLUGGED

Dear Half-Mast,

Those drain plugs in the bottom of our Nike-Hercules van—Do we leave 'em in or take 'em out?

SFC P. D.



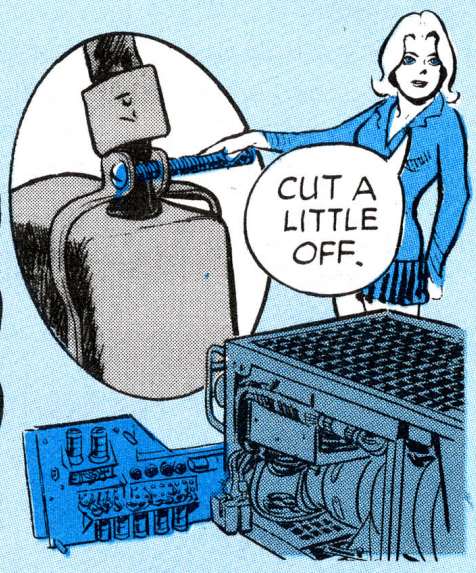
Dear Sergeant P. D.,

Leave 'em in. The air conditioners in the BC and RC vans can suck all sorts of junk up inside when the plugs are out. And even without the air conditioners doing any inhaling from the outside—like with the launching control trailer—stuff can blow up into the drains.

So set up a schedule on DA Form 314 for the vans—a schedule that tells you to take out the plugs every so often for a drainage.

Half-Mast

OPEN AND SHUT CASE

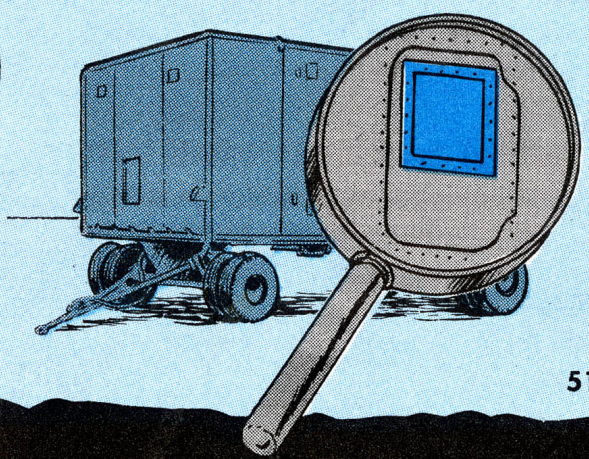


It happens in your Improved Nike-Hercules RC van whenever you fasten shut the electronic marker generator chassis in the azimuth and range indicator. The screw for the clamp on the P7 connector hits the J3 connector cable, that's what.

One day the screw will break through the insulation and with 8,000 volts running through the cable, you'll have troubles. Like maybe a ruined power supply for the B-scope . . . or a shock that'll send you from here to there.

What to do? Cut off about 1/2 inch of the screw. The part left will hold the clamp.

READY AND SET TO GO

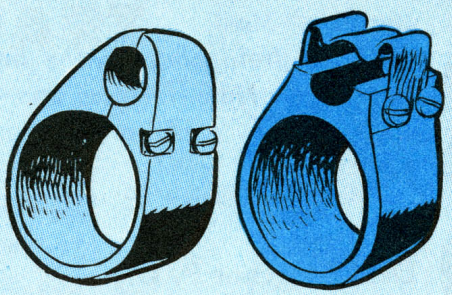


Cut to size and painted . . . that's the story on the plastic escape hatch covers for your Nike-Hercules vans. Right . . . your support unit no longer has to cut out the cover from a plastic sheet.

The cover goes under FSN 2540-348-9358 and is listed on page 4-29 of Fed Cat C2540-IL-A (Jan 68).

NIKE

WRONG CLAMP IS PUNCHY



Next time the man from direct support comes around, you might drop a hint or two—if he's going to change the spring clamp assembly in your Nike-Hercules target—or missile-tracking radars. The clamp goes with the converter amplifier for the TTR, MTR and improved MTR . . . and is on the inside wall for the receiver-transmitter in the improved TTR.

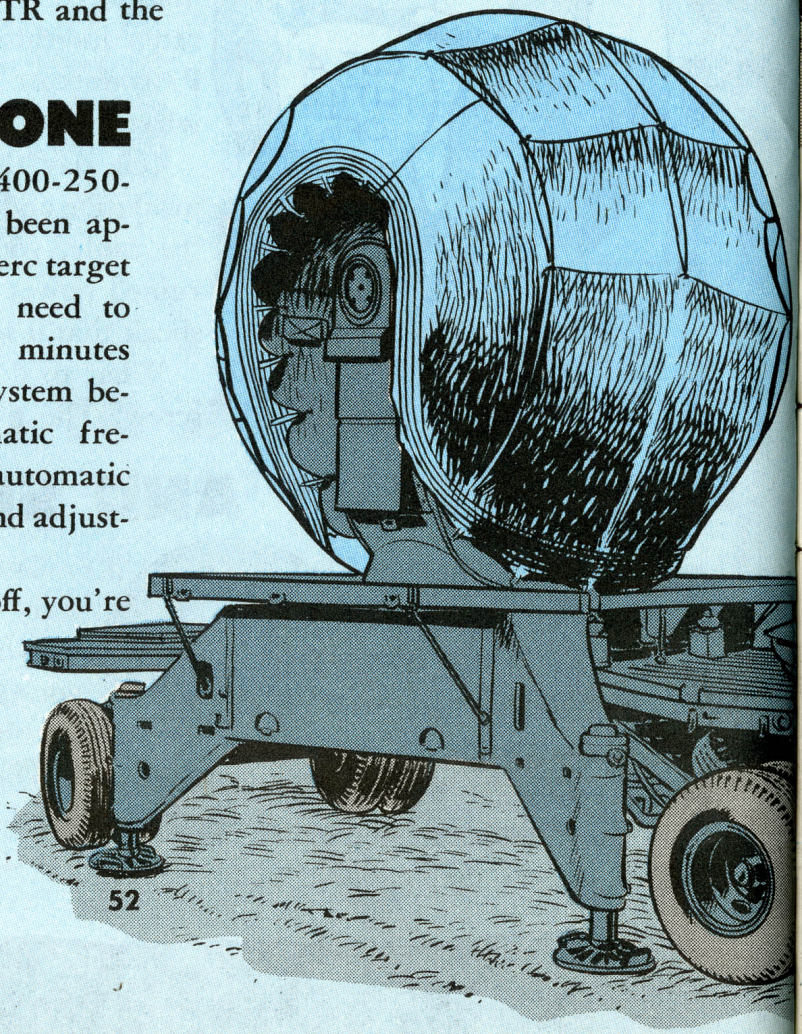
The clamp the DSU man should use is the 1-piece job listed under FSN 1430-759-9891 on page 67 of TM 9-1430-250-15P/3/1 (Jun 67).

It replaces a split clamp that has a habit of punching a hole in the thermostat if it's not mounted right. And a busted thermostat means cooling troubles for the 6116 electron tube in the TTR and the 2K45 tube in the MTR.

WAIT ONE

Once MWO 9-1400-250-30/52 (Feb 67) has been applied to your Nike-Herc target tracking radar, you need to hold one! Wait 90 minutes after firing up the system before making automatic frequency control and automatic gain control checks and adjustments.

If you don't hold off, you're wasting time with the checks and adjustments. They just won't work out because those 90 minutes are needed to stabilize the amplifier detector (the old video and phase unit).



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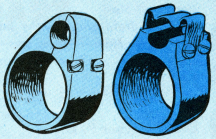

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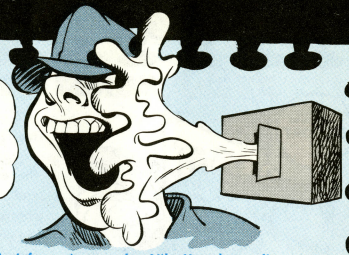


Dear Half-Mast,

Would you pass along this information to other Nike-Hercules outfits so they'll learn from our experience?

The other day one of the elbow connections in the glycol lines for our HIPAR let go. And with all the pressure that goes with it, the glycol sure messed up the klystron — to the tune of a few thousand greenbacks. We found out later that there had been a slight glycol leak at the elbow . . . and if we had spotted it sooner, we could have stopped the trouble before we had it.

So it pays to keep an eye peeled for cracks and leaks, especially at the connections. It's also a good idea to look through the opening for the waveguide now and again. If things seem damp inside, chances are real good that glycol's leaking from somewhere.

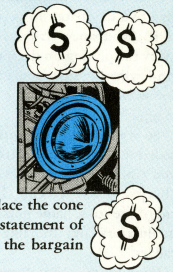
SSG W. L.

Dear Sergeant W. L.,

We've passed the word. And thanks.

Half-Mast

CRACKED CONE COSTLY



Consider yourself lucky . . . or careful — or both — if you've taken off or put on the reflector for your Nike-Hercules missile or tracking radars without battering the duplexer cone (cover).

Some guys are neither . . . so when they move the reflector around with a hoist, it clobbers the cone. A cracked cone can let in moisture and this stuff in the duplexer plumbing can play hob with RF transmission.

'Course . . . the idea would be to replace the cone . . . and if you've ever been hit with a statement of charges for one, you know it's not on the bargain counter.

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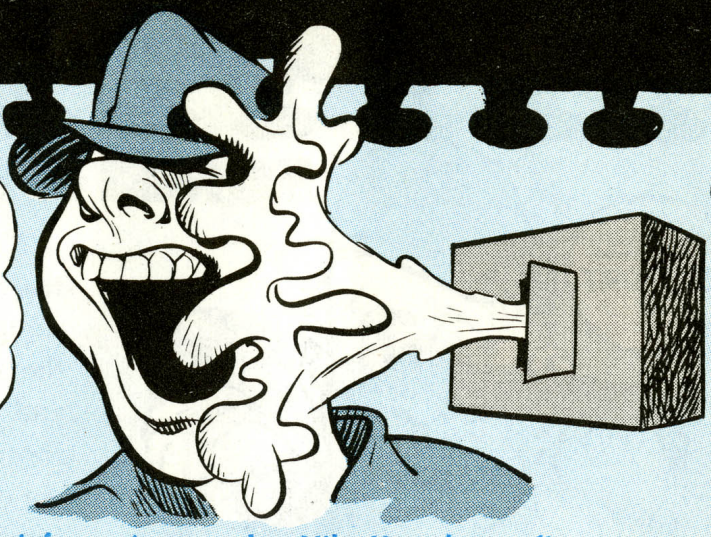

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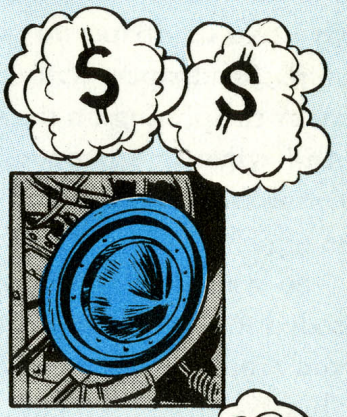

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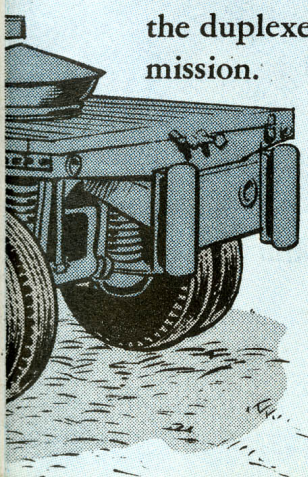

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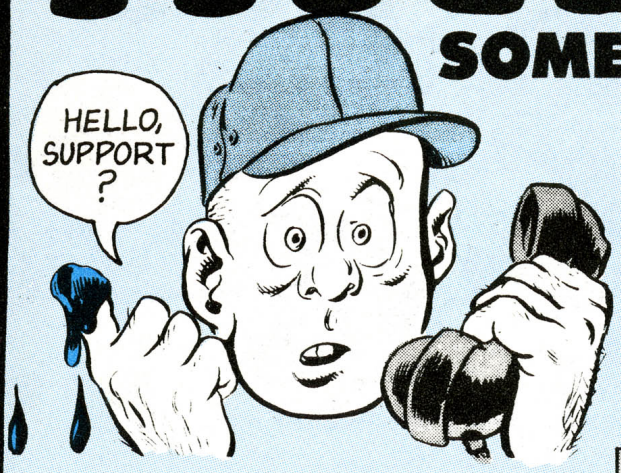
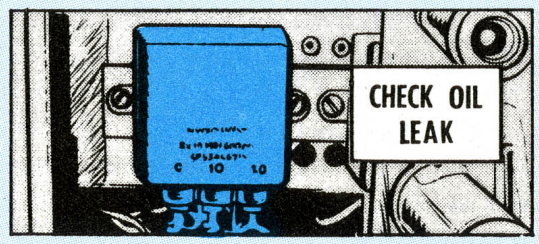
SOMETHING SERIOUS!



F'rinstance . . . when the oil gets real low in the capacitors on the computer frame in your BC van, the capacitor loses its insulation and breaks down. This means shorting inside the capacitor and the components that are tied to the capacitor.

And believe it . . . when you see oil leaking from an oil-filled capacitor or transformer in equipment on your Nike-Hercules site, it's time to call your support people.



ROUGH AS A COB

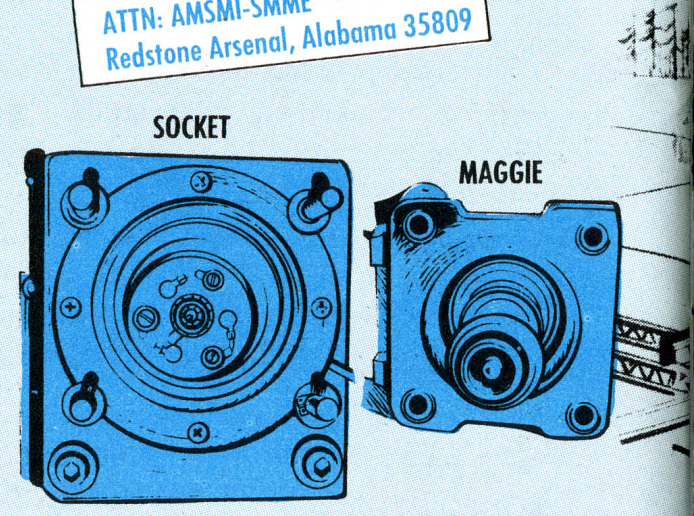
What's that . . . the 7208B magnetron in your Nike-Hercules target ranging radar keeps acting up—like it works one minute and not the next?

Could be that some guy went overboard when he cleaned the magnetron and its socket. That is, he used an abrasive like sandpaper to get rid of corrosion. Sandpaper scratches and wears away the plating on the socket contacts. And when this happens, there's a bad connection between the socket and maggie.

So wait until you're sure that a corroded socket and magnetron are giving you troubles . . . and then use a light abrasive—like crocus cloth—to get rid of the stuff. Same goes for maggies, modulators and the like in all your radars.

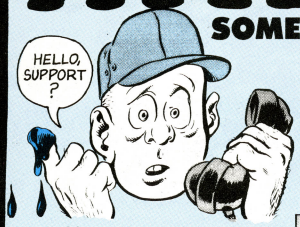
Suppose the 7208B magnetron and its socket are clean and the maggie still seems sick. You might have a socket that wasn't made quite right. Send it along with a 2407 EIR to:

Commanding General
U.S. Army Missile Command
ATTN: AMSMI-SMME
Redstone Arsenal, Alabama 35809



The Missile Command people will find out right quick if a bum socket is to blame.

SOMETHING SERIOUS!



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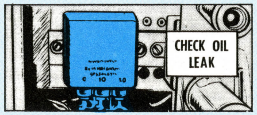

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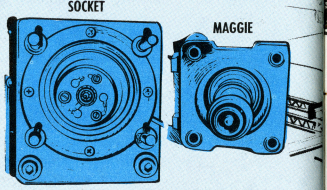
Redstone Arsenal, Alabama 35809



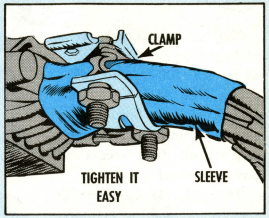
The Missile Command people will find out right quick if a bum socket is to blame.

TRICK UP YOUR SLEEVE

You know how you have wiring harnesses with cable connector clamps around 'em in your Nike-Hercules AN/MPQ-T1 simulator station.

Take the wiring harness in the top right section of the ECM chaff cabinet as a f'rinstance. You can tighten the clamp so much that the insulation will be cut . . . and this can mean shorting the +150-volt regulator in the power cabinet.

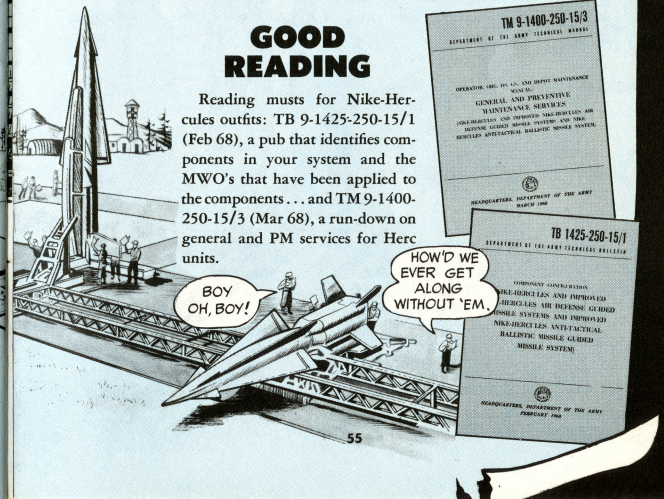
What you need is some plastic sleeving between the wiring and the clamp. Your support people can get it for you. There's a 100-ft roll on page 86 of TM 9-1430-250-15P/2/1 (Jun 67). It comes under FSN 5970-882-5007.



Cut what you need to fit under the clamp . . . slice it lengthwise . . . slip it on the wiring—under the clamp . . . and then tighten the clamp. Careful . . . Don't tighten the clamp so you'll crush the wiring.

GOOD READING

Reading musts for Nike-Hercules outfits: TB 9-1425-250-15/1 (Feb 68), a pub that identifies components in your system and the MWO's that have been applied to the components . . . and TM 9-1400-250-15/3 (Mar 68), a run-down on general and PM services for Herc units.



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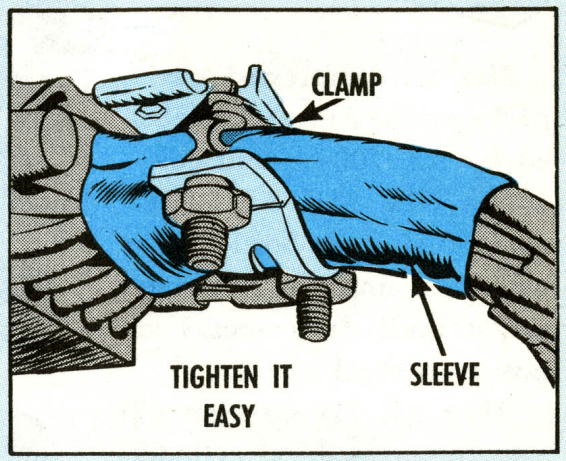

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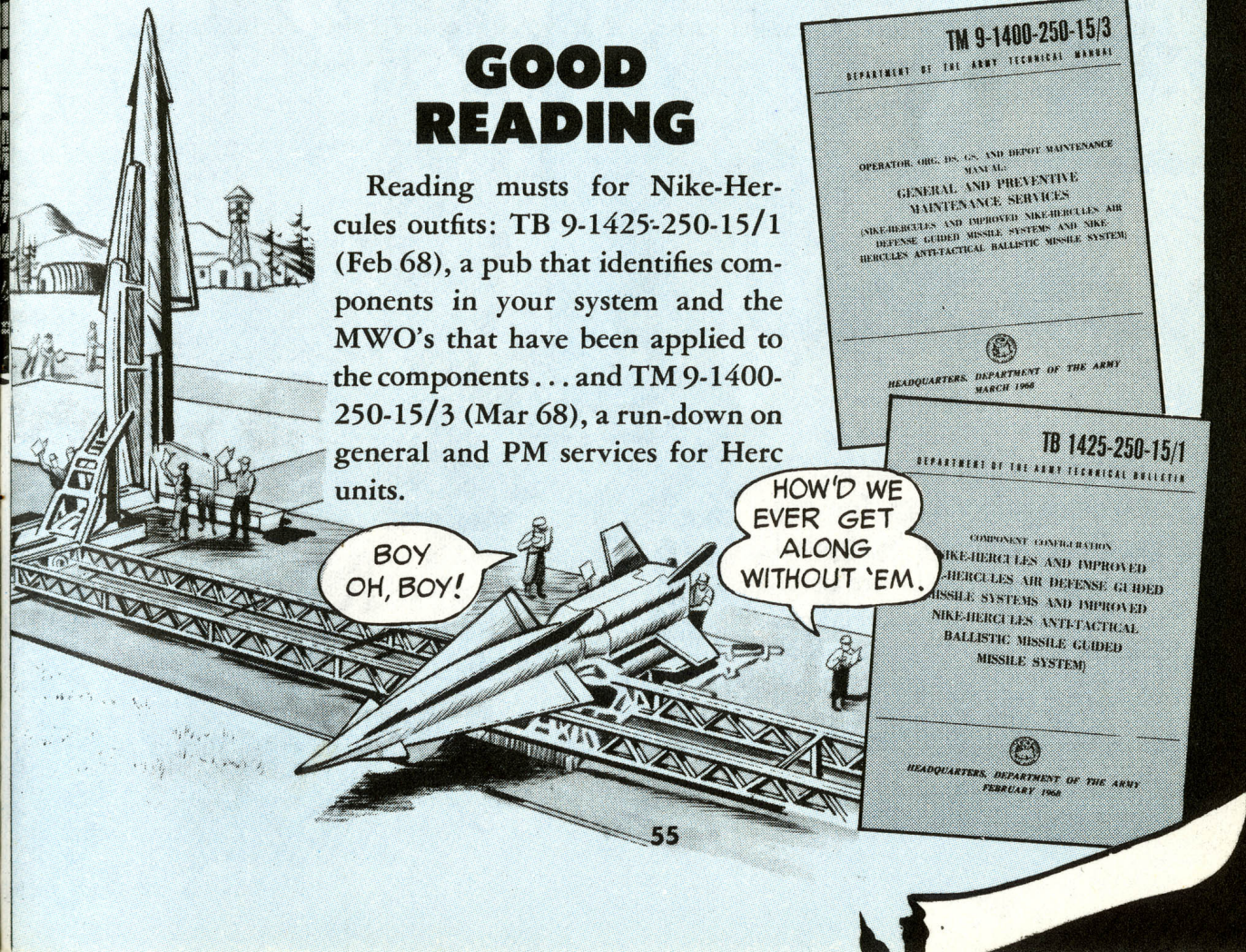

Not all compressed gas is packaged the Army way, labeled by AR 700-68 and color-coded like MIL-STD-101A says. So if a gas bottle shows up out of uniform, you don't use it until the contents are positively checked out.

That AR 700-68 (Jan 67) says compressed gas cylinders carry DA Label 31 or 56 if they're flammable gas and DA Label 65 or 66 otherwise. It also says safety regs for gas handling have to be posted wherever such gases are used.

The catch is, commercial gas cylinders don't always carry the Army color codes or labels, any more'n civilians wear OD duds.

GENERAL AND SUPPORT

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So the only way Army types can use commercial cylinders is to—

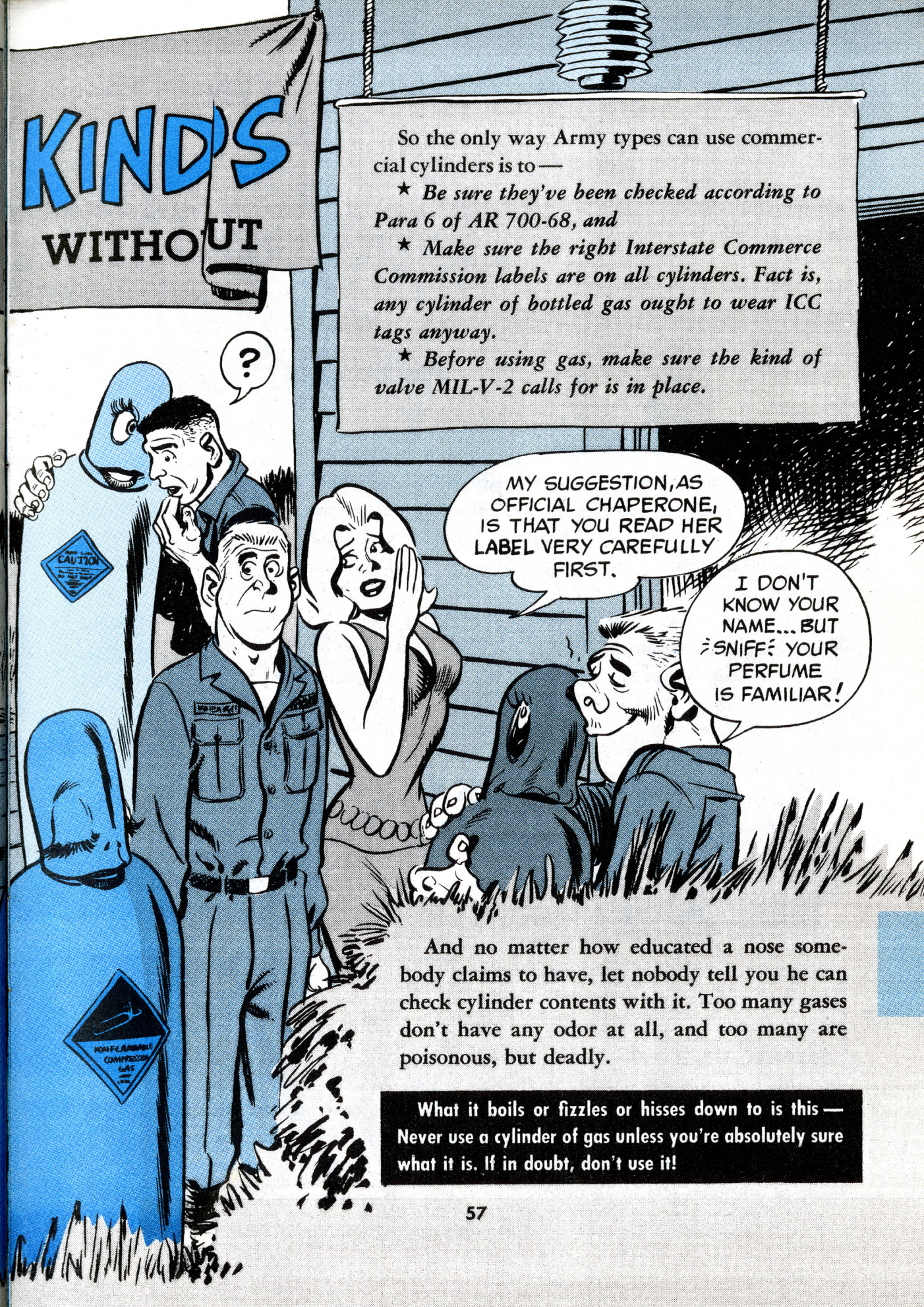
★ *Be sure they've been checked according to Para 6 of AR 700-68, and*

★ *Make sure the right Interstate Commerce Commission labels are on all cylinders. Fact is, any cylinder of bottled gas ought to wear ICC tags anyway.*

★ *Before using gas, make sure the kind of valve MIL-V-2 calls for is in place.*

And no matter how educated a nose somebody claims to have, let nobody tell you he can check cylinder contents with it. Too many gases don't have any odor at all, and too many are poisonous, but deadly.

What it boils or fizzles or hisses down to is this—Never use a cylinder of gas unless you're absolutely sure what it is. If in doubt, don't use it!



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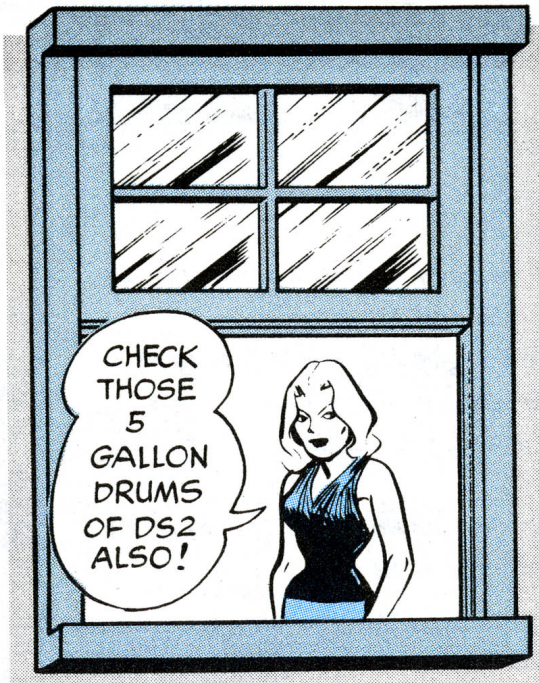
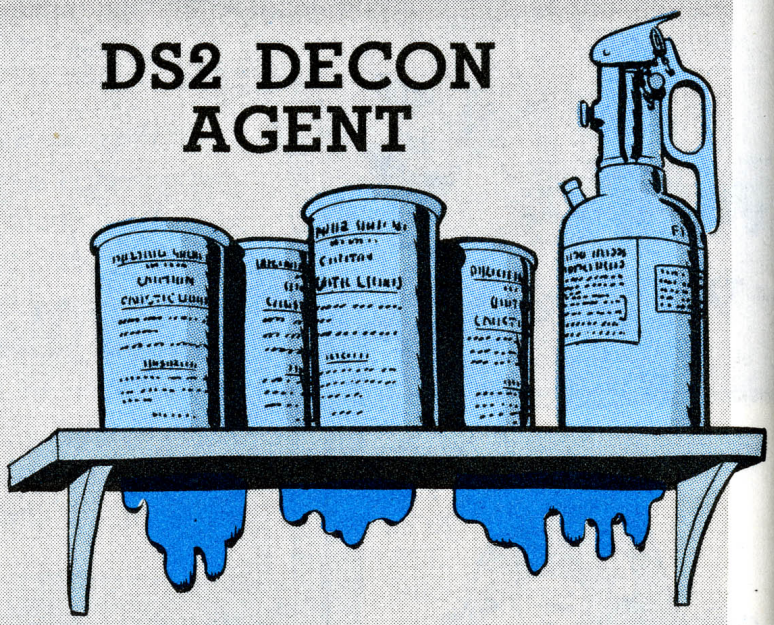


DS2 DECON AGENT



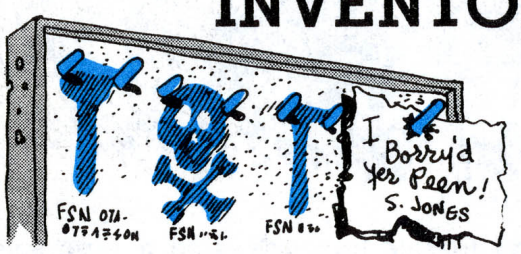
Here's the latest scoop on storage life of DS2 for your M11 portable decon.

The stuff is OK as long as the M11 doesn't leak. Same goes for DS2 in 1-1/3-qt cans (FSN 6850-753-4827) and in 5-gal drums (FSN 6850-753-4870). As long as the containers are sound, storage life of DS2 is supposed to be indefinite. And, the DS2 info in FM 3-8 (Jan 67) will be changed to say so.

So, just remember—never fill an M11 from a can or drum that shows signs of leakage. And, when the M11 is kept filled, check it carefully for leaks, especially between the spray head and the container. A leak there of course, means the preformed packing (FSN 5330-265-1084) needs attention or replacement.

After the leak is fixed, the M11 will need a fresh batch of DS2, of course.

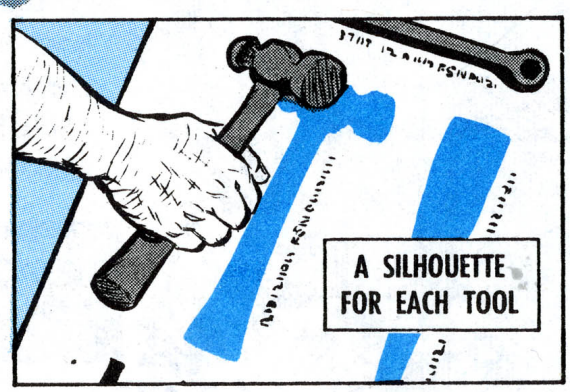
INVENTORY HELPER



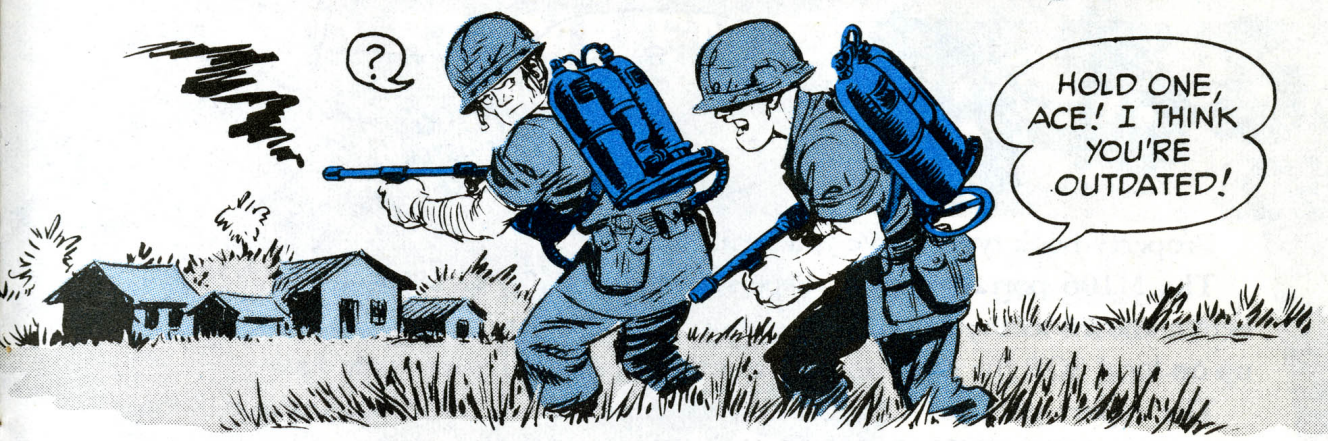
When tool set inventory time rolls 'round the description in the supply catalog comes in mighty handy.

Handier still, is a sheet of plywood on which silhouettes of the tools are painted. The nomenclature or FSN is also painted on the board.

Saves a lot of time—especially when there're umpteen sets in an outfit.



WATCH THAT DATED HOSE

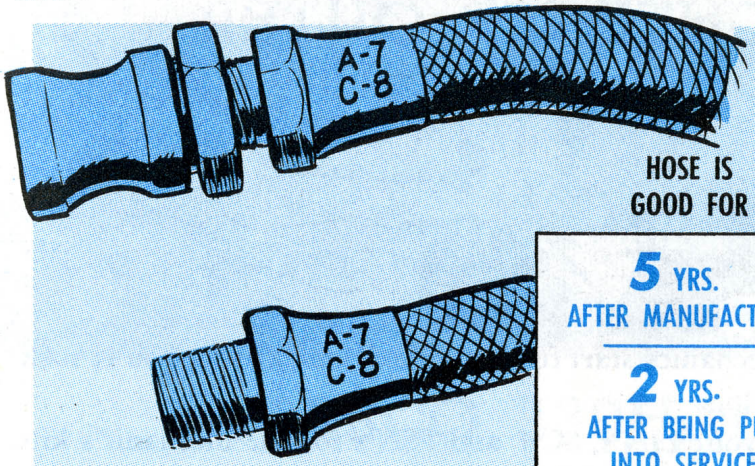


As you were—portable flame-and-disperser gunners.

The M8 hose, FSN 1040-569-9730, used on the M2A1-7 flame thrower and the M3 disperser, must always tell its age. Here's why:

The hose is good for only 5 years after manufacture, and for 2 years after its date of issue.

You'll find the serviceability dates stamped on the coupling on each end of the hose. The date of manufacture is first, and under it you'll find the date of issue.



HOSE IS GOOD FOR

5 YRS. AFTER MANUFACTURE

2 YRS. AFTER BEING PUT INTO SERVICE

HERE'S THE CODE:

A THRU L FOR MONTHS;
1 DIGIT AFTER THE LETTER STANDS FOR THE YEAR . . .
EXAMPLE:
A-8 = JAN '68

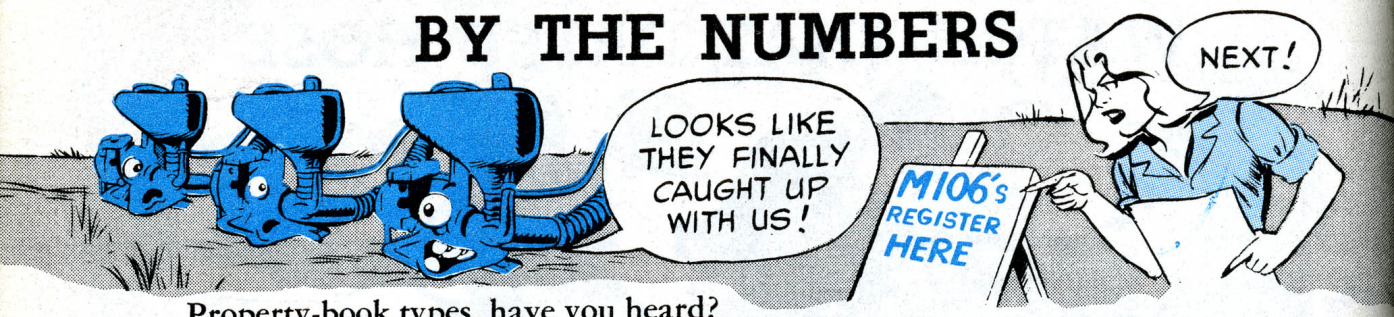
The dates are coded. A through L for the months and a number to call out the last digit in the year. Example, when you find **A8** as the second date noted on the couplings, you know the hose was issued in January 1968. The hose is OK for 2 years from that date.

When the life of the hose is expired, you deadline the weapon right now, and replace the bad hose.

Same goes, natch, if for some reason there's no date at all on the couplings.

And, of course, during its 2 years of life in the field, the M8 is due its pressure test every 6 months.

BY THE NUMBERS



Property-book types, have you heard?

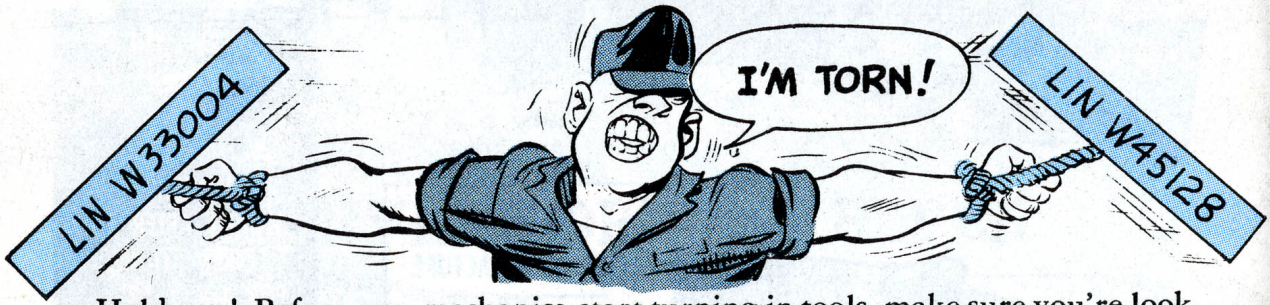
The M106 portable agent disperser (FSN 1040-782-6891, LIN G22046)—better known as the Mity Mite—is up for registration. Well, quick-like check up on local SOP for reporting the number of M106's your outfit has.

The report goes to: CG, U.S. Army Ammunition Procurement and Supply Agency, ATTN: SMUAP-RSB, Joliet, Illinois 69436. And, be sure to add your outfit's identification, UIC, etc., to the letter, message or whatever you use to make the report.

You'll soon get back serial numbers for your dispersers, and instructions on how to go about branding the M106.

The word went out in USAPSA Msg FG 80791027.

MECHANIC'S STRAIGHTENER OUTER



Hold one! Before you mechanics start turning in tools, make sure you're looking at the right supply catalog.

Here's how to match up your LIN's, SC's and FSN's for the mechanic's kits.

NEW	OLD
FSN 5180-754-0641	
Tool Kit, Automotive Mechanic's LIN W33004 SC 5180-97-CL-E50 (Feb 68)	Tool Kit, Automotive Mechanic's LIN 569151 SM 10-4-5180-A13 (Jan 62)
FSN 4940-209-6226	
Tool Kit, Mechanical Repairman LIN W45128 SC 4940-95-CL-A69 (Dec 67)	Tool Kit, General Mechanic's LIN 946193 SC 4940-95-CL-A69 (Aug 65) (For TOE 29-41, -42, -45, -46, -55, -56, -57, -85, -86, -87, 57, and 67)

IDENTICAL FIIN's?

DOUBLE CHECK ... AND STAMP 'EM OUT!

Keep an eye out for different FSN's which have identical FIIN's. Such FSN's are double-crossers, 'cause they cover one and the same item.

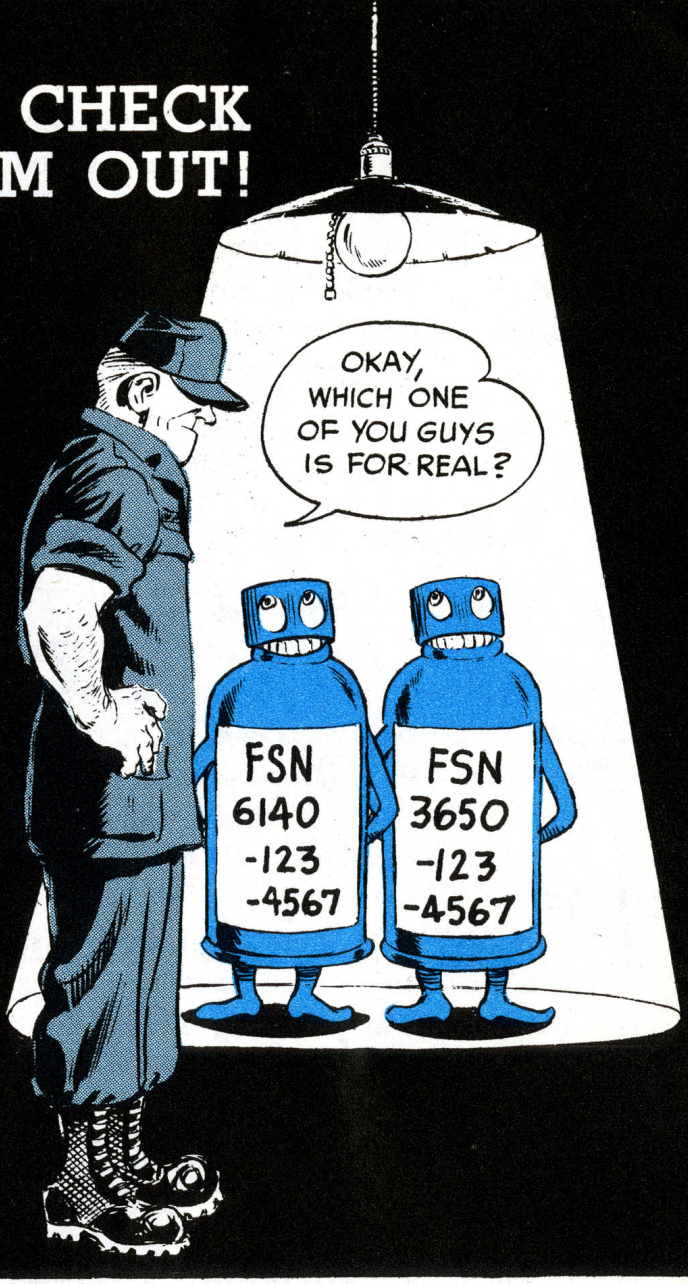
In case you've forgotten:

The first 4 digits of an FSN identify an item's FSC (Federal Supply Classification) which tells what commodity group and class an item belongs to.

The last 7 digits of an FSN make up an item's **FIIN** (Federal Item Identification Number).

Once a FIIN is assigned to an item, that FIIN is never supposed to be duplicated . . . it's never to be used with any other FSC to identify any item.

Anytime you find different FSN's with identical FIIN's in supply records, supply publications, etc., alert your supply support soonest. They'll get back to you with the current FSN for the item.



WABCO 330HAD PUBS

No, you don't take equal parts of the TM's for a Model 220 and a Model 440 and mix 'em to get TM's for a Model 330HAD road grader. Whatcha do is order MECOM Stock No. 7610-C-1-3608 and stand back — out'll fly a parts pub and maintenance book.

MEDIC'S PM MANUAL

Need to know about Preventive Maintenance Procedures and Serviceability Standards for Medical Equipment? Then get hold of TM 8-605 (Mar 68). It supersedes SB 8-70 (Sep 61) and TM 8-605 (Oct 61).

CAN

Those 5-gal gas cans and water cans are mighty important in keeping you and your equipment on the go. To make sure they're there when you need 'em, give 'em a break when they're taking a break and store 'em right.

GAS CANS

Make sure the cans are clean and free from dirt, rust and gook.

Coat the inside with clean oil.

Use PL-S preservative (VV-L-800, Lube Oil, general purpose, preservative.) FSN 9150-231-9062 gets you a 5-gal pail. If you can't get the PL-S then use OE-10 (MiL-L-2104), Lube Oil internal combustion engine. FSN 9150-265-9425 is good for 1 quart and FSN 9150-265-9428 for a 5-gal pail.

If you're in Europe and have the lined cans, you don't have to coat the insides. Just clean 'em well with fuel or dry cleaning solvent and cap tightly. Ventilate real well before you close 'em.

Use the same oil until it gets diluted with gasoline. **Be sure you drain the oil from each can after you've coated it. Close the filler caps hand tight before you store the cans.**

Store the empties indoors or outdoors, whatever your CO says to do. Be sure you cover 'em with a tarp if they're outside.

CAN STORAGE

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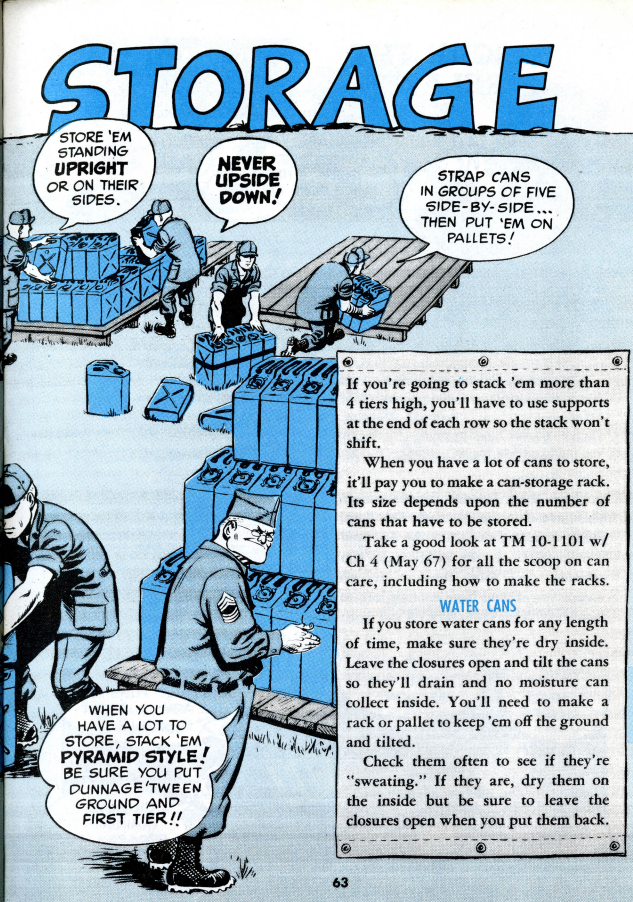


If you're going to stack 'em more than 4 tiers high, you'll have to use supports at the end of each row so the stack won't shift.

When you have a lot of cans to store, it'll pay you to make a can-storage rack. Its size depends upon the number of cans that have to be stored.

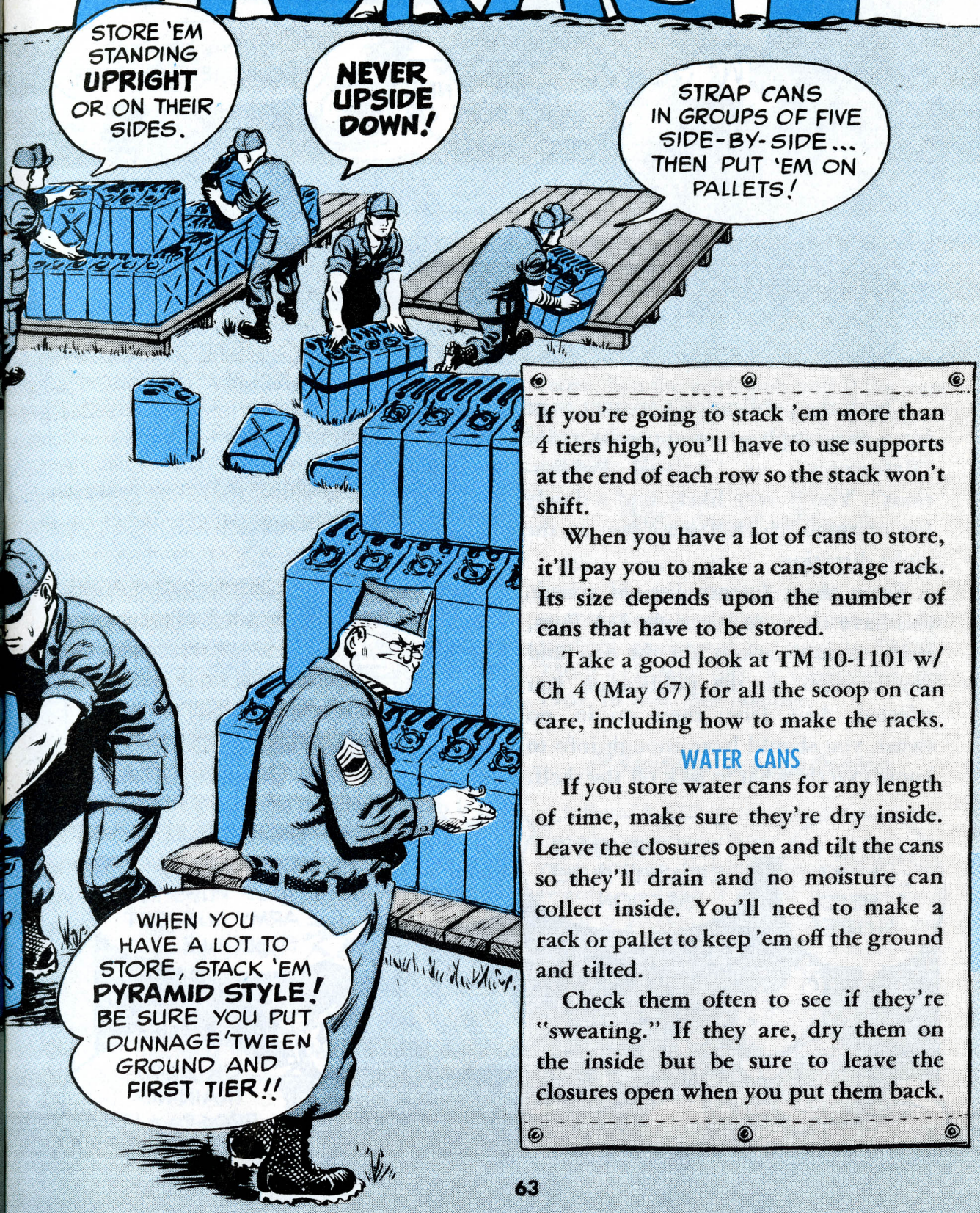
Take a good look at TM 10-1101 w/ Ch 4 (May 67) for all the scoop on can care, including how to make the racks.

WATER CANS

If you store water cans for any length of time, make sure they're dry inside. Leave the closures open and tilt the cans so they'll drain and no moisture can collect inside. You'll need to make a rack or pallet to keep 'em off the ground and tilted.

Check them often to see if they're "sweating." If they are, dry them on the inside but be sure to leave the closures open when you put them back.

STORAGE



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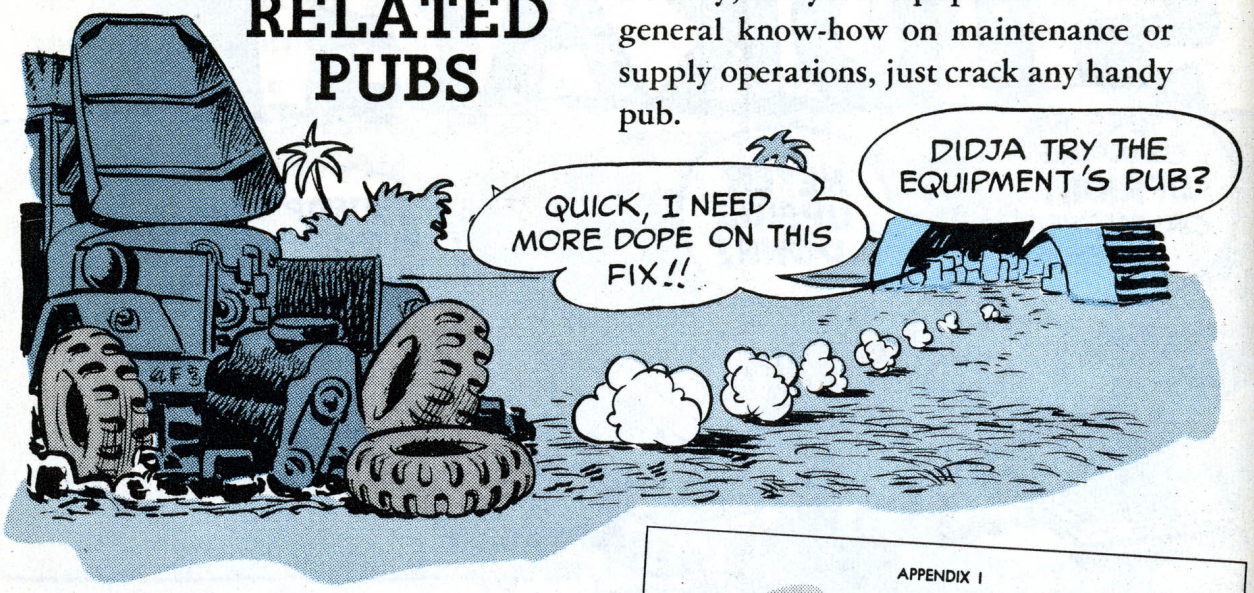
SCAN THE RELATED PUBS

Anytime you need more scoop . . . in a hurry, on your equipment or some general know-how on maintenance or supply operations, just crack any handy pub.



Check the publication's content page for a paragraph or an appendix titled "References", or "Related Publications". You'll very likely find a dandy list of pubs which'll steer you in the right direction.

From the reference list, of course, you have to go to the right DA Pam, index to publications, for the date and any changes on the publication you selected. And, from there on in, no sweat, you should have enough info to know exactly what to pick off the shelf.

APPENDIX I

REFERENCES

1. Dictionaries of Terms and Abbreviations

AR 320–5	Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations and Brevity Codes.

2. Fire Protection

SB 5–111	Supply of DA Approved Fire Extinguishers to Army Troop Users.

3. Lubrication

LO 5–4310–246–15	Lubrication Order
FSC C9100–IL	FSC Group 91; Fuels, Lubricants, Oils, and Waxes.

4. Painting

TM 9–213	Painting Instructions for Field Use.

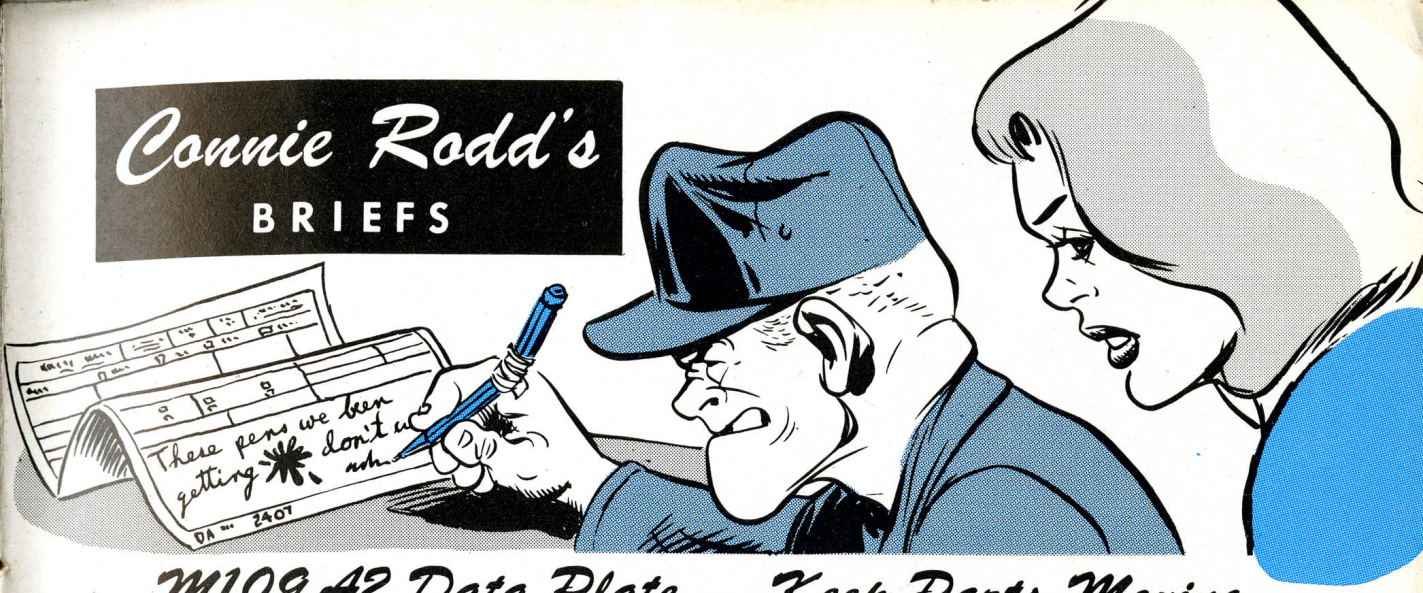
5. Preventive Maintenance

AR 700–38	Unsatisfactory Equipment Report.
AR 750–5	Maintenance Responsibilities and Shop Operation.
TB ENG 347	Winterization Techniques for Engineer Equipment.
TM 5–764	Electric Motor and Generator Repair.
TM 9–207	Operation and Maintenance of Ordnance Material in Extreme Cold Weather (0 to −65°F).
TM 9–6140–200–15	Direct and General Support and Depot Maintenance: Storage Batteries, Lead-Acid Type.
TM 38–750	Army Equipment Record Procedures.

6. Publication Indexes

DA Pam 108–1	Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings.
DA Pam 310–1	Index of Administrative Publications.
DA Pam 310–2	Index of Blank Forms.
DA Pam 310–3	Index of Doctrinal, Training, and Organizational Publications.
DA Pam 310–4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 4, 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification

Connie Rodd's BRIEFS



M109A2 Data Plate

Are you sure you've got the right data plate identifying your M109A2 2½-ton shop van truck? This's the job with the LDS 427-2 multifuel engine. If you need a new plate, get it from USATACOM, RIC B24, under FSN 2590-725-1063. Tell the right FSN for your vehicle — with winch it's FSN 2320-440-8308, without winch it's FSN 2320-440-8313.

Care For The Aged

Nike-Hercules outfits: TB 11-6135-200-25/1 (Nov 67) is for you. It tells you what to do with unserviceable and overage batteries — the BA-472B/U, BA - 472C/U, BA - 485/U and BA - 485A/U. The TB doesn't mention the BA-617/U, but the info in the pub is the same for this battery — except it doesn't reach overage until it's 8 years old, figured from the day it was assembled.

Survival Kit Poop

Hey there, airmen! The basic issue item list for your survival kit is now in Ch 1 (9 May 68) to TM 55-8465-206-13. Replace those missing parts, pronto.

Keep Parts Moving

Hey, you supply types! When a mech turns in a faulty part never let it collect dust on the shelf. Take the direct action route. Eye the parts pub and if the item is recoverable get it moving to support for repair or overhaul. Keep the parts pipeline filled.

Medical Check

Have your medical equipment records had a checkup lately? Latest scoop on maintenance and historical records for medical equipment is found in TB 38-750-2 (12 Mar 68). It supersedes the 1967 TB with that number.

Coming on Strong

Is that TA-182/U telegraph-telephone signal converter ringer too strong for your carrier terminal equipment? No sweat . . . Take it out of the case and see if a 20,000 ohms resistor is at pin 10 or on terminal board YZ. If there's no resistor across R26, then see your support maintenance about getting one put in. It takes only a few minutes. If you're having trouble locating the resistor get your support to identify it.

Would You Stake Your Life right now on the Condition of Your Equipment?

MAN THE EIR Digest IS THE SCENE

- It tells you what's the latest on EIR'S filed.
- It tells you who's MWO-ing what.
- It gives you a chance to find out what some of the latest maintenance problems are all about...you get some good useable ideas that way, see!!
- But most of all it may publish YOUR EIR - so you can see what action you produced.

Like, Make the Scene, Man IT'LL BLOW YOUR MIND

PREVENTIVE MAINTENANCE